DOCUMENT RESUME

ED 329 838 CG 023 208

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TITLE Entering Adulthood: Moving into Fitness. A Curriculum for Grades 9-12. Contemporary Health Series.
SPONS AGENCY Walter S. Johnson Foundation, Menlo Park, CA.
REPORT NO ISBN-1-56071-043-8
PUB DATE 91
NOTE 100p.; For related documents, see CG 023 209-210.
AVAILABLE FROM Network Publications, 1700 Mission St., Suite 203, P.O. Box 1830, Santa Cruz, CA 95061-1830 ($19.95).
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Aerobics; Body Composition; Body Image; Exercise; Health Education; High Schools; *High School Students; Muscular Strength; Physical Education; *Physical Fitness; *Secondary School Curriculum

ABSTRACT

This module includes seven lessons designed to help students in grades 9-12 enhance their present and future levels of fitness. It begins with an exploration of the meaning and benefits of fitness. In lesson 1, students complete an inventory to assess their present level of physical activity. Lesson 2 deals with students' feelings about their physical appearance, and includes suggestions for enhancing body image. In lesson 3, students complete a series of activities that measure their present levels of physical fitness, and in lesson 4, students use this information to assess their individual fitness. This lesson includes an aerobic workout, and students develop a plan to maintain aerobic fitness. In lesson 5, students look at ways to enhance other elements of personal fitness, including body composition, flexibility, muscular strength, and endurance. Lesson 6 helps students identify myths and facts about exercise. It also examines some of the factors that influence the success of an exercise program. Lesson 7 deals with the importance of attitude and lifestyle related to physical fitness, then uses this information to develop personal fitness plans. Students are also given an opportunity to survey people who exercise regularly and develop a report. Lessons include information about objectives, materials, instructional strategies and procedures, evaluation, and the subject matter for teachers; and worksheets and handouts for students. (LLL)

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ENTERING ADULTHOOD

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Moving into Fitness

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CONTEMPORARY HEALTH SERIES
Kathleen Middleton, MS, Series Editor

ENTERING ADULTHOOD:

Moving into Fitness

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Moving into Fitness

A Curriculum for Grades 9-12

Betty M. Hubbard, EdD, CHES

Contemporary Health Series
Kathleen Middleton, MS, Series Editor

Network Publications, a division of ETR Associates
Santa Cruz, CA • 1991

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P.O. Box 1830, Santa Cruz, CA 95061-1830.

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

Cover design: Julia Chiapella

Illustrations: Ann Smiley

Title No. 398

Library of Congress Cataloging-In-Publication Data

Hubbard, Betty M.
Entering adulthood : moving into fitness : a curriculum for grades 9-12 / Betty M. Hubbard.
p. cm. — (Contemporary health series)
Includes bibliographical references.
ISBN 1-56071-043-8
1. Physical education and training—Study and teaching (Secondary)—United States. 2. Physical fitness—Study and teaching (Secondary)—United States. I. Title. II. Series.
GV365.H83 1991 90-20991
796'.071'273—dc20 CIP

This curriculum was made possible, in part, by a grant from the Walter S. Johnson Foundation. The opinions expressed in this curriculum are those of the author and do not necessarily reflect the opinions of the Walter S. Johnson Foundation.

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EDITOR'S PREFACE
Contemporary Health Series

Health educators and practitioners know that prevention of health problems is far more desirable than treatment. The earlier the knowledge and skill to make healthful decisions are instilled, the greater the chance a healthful lifestyle will be adopted. School is the logical place in our society to provide children, adolescents and young adults the learning opportunities essential to developing the knowledge and skills to choose a healthful life course.

The **Contemporary Health Series** has been designed to provide educators with the curricular tools necessary to challenge students to take personal responsibility for their health. The long-range goals for the **Contemporary Health Series** are as follows:

Cognitive. Students will recognize the function of the existing body of knowledge pertaining to health and family life education.
Affective. Students will experience personal growth in the development of a positive self-concept and the ability to interact with others.
Practice. Students will gain skill in acting on personal decisions about health-related life choices.

Within the **Contemporary Health Series** there are two curricular divisions: Into Adolescence for middle school teachers and Entering Adulthood for high school teachers. The Into Adolescence modules focus on several different health and family life topics. Modules addressing puberty, AIDS, the family, self-esteem, reproduction and birth, sexual abstinence, and drug, alcohol and tobacco education have been developed by skilled author/educators.

Entering Adulthood includes reproduction, birth and contraception, health behavior, communication and self-esteem, AIDS and other STDs, relationships, sexual abstinence, and drug, alcohol and tobacco education.

All the authors are, or have been, classroom teachers with particular expertise in each of the topic areas. They bring a unique combination of theory, content and practice resulting in curricula which weave educational learning theory into lessons appropriate for the developmental age of the student. The module format was chosen to facilitate flexibility as the modules are compatible with each other but may stand alone. Finally, ease of use by the classroom teacher has driven the design. The lessons are comprehensive, key components are clearly identified and masters for all student and teacher materials are provided.

The **Contemporary Health Series** is intended to help teachers address critical health issues in their classrooms. The beneficiaries are their students, our children, and the next generation.

Kathleen Middleton, MS, CHES
Series Editor

INTRODUCTION

Every day, we all make choices about physical activities that affect our level of fitness. Fitness, in turn, impacts a wide range of physical, mental and social factors. Research has linked fitness to a wide variety of health-related conditions. Self-concept, stress management, obesity, cardiovascular disease, diabetes, osteoporosis and mental attitude are all influenced by physical activity.

This relationship between health and fitness is widely publicized by the media. The publicity has led to a surge in fitness programs and facilities, with increasing numbers of Americans participating in the programs.

Some people undertake sound programs of regular exercise that yield both short- and long-term benefits. Others exercise only sporadically or inappropriately—which may actually endanger their health. Some Americans invest in expensive exercise equipment. Investment or not, people often become disenchanted with exercise programs, due to lack of knowledge or motivation.

Research suggests that fitness levels of American youth have declined in recent years, due to a change in lifestyle that reflects lower levels of activity. Because lifestyle behaviors are acquired, teens need to have the opportunity to practice skills that can help them achieve increased levels of fitness. By incorporating exercise into their lifestyle as teenagers, our youth can develop fitness skills that will enable them to maintain fitness throughout their lives.

As the author of this module, I have attempted to offer a curriculum to help students enhance their present and future levels of fitness. The lessons are designed to involve students in a variety of instructional strategies. Attempts have been made to make the curriculum sensitive to the cultural, economic and physical differences among young people.

The lessons are based on current research and reflect the latest theories about the assessment and enhancement of the components of fitness. The module is appropriate for use in the health education or physical education setting.

Teacher Considerations

The nature and structure of the module provides the opportunity to coordinate health education and physical education classes to meet the objectives of each lesson. You may want to conduct these activities as part of the physical education program, using gymnasium equipment or a playing field. Complementary activities such as inventories, mini-lectures and group work may be conducted as part of the health education program.

Equipment for assessing the components of fitness may be obtained from physical educators at your school or local fitness facilities. Information on the purchase or construction of the equipment is provided in the appendix.

Many students will be self-conscious about their levels of fitness and their personal appearance. ***Be sensitive to student feelings and provide an element of privacy when conducting the assessments.*** Emphasize that the assessments are noncompetitive. The goal of this module is to enhance individual levels of fitness—not to compare scores and measurements or to compete.

Your students will undoubtably represent a variety of levels of fitness. Some are fit; some are completely inactive. Emphasize that any physical activity is beneficial. Just taking the stairs instead of the elevator is a step toward moving into fitness.

Overview

The module begins with an exploration of the meaning and benefits of fitness. In Lesson 1, students complete an inventory to assess their present level of physical activity. Students are also given the opportunity to survey local fitness facilities and interview people who exercise regularly and report on these activities in a later lesson.

To help prepare students for the assessments that follow, Lesson 2 deals with students' feelings about their physical appearance. The lesson begins with activities to increase students' awareness of their body image and includes suggestions for enhancing body image.

In Lesson 3, students complete a series of activities that measure their present levels of physical fitness. In the next lesson, students use this information to assess their individual

fitness. This lesson includes an aerobic workout, and students develop a plan to maintain aerobic fitness.

In Lesson 5, students look at ways to enhance other elements of personal fitness, including body composition, flexibility, muscular strength and endurance. Lesson 6 helps students identify myths and facts about exercise. It also examines some of the factors that influence the success of an exercise program. At this time, students report on the fitness surveys assigned in the first lesson.

The final lesson deals with the importance of attitude and lifestyle related to physical fitness. Students look at their fitness goals, as well as possible barriers to fitness, then use this information to develop personal fitness plans.

Objectives

Lesson 1	*The Meaning of Fitness*	■ Students will be able to list three benefits of fitness. ■ Students will be able to describe the elements of fitness.
Lesson 2	*Feeling Good About Myself*	■ Students will be able to identify feelings about specific physical features. ■ Students will be able to describe ways to improve body image. ■ Students will be able to demonstrate behaviors that enhance the body image of others.
Lesson 3	*On Your Mark, Get Set, Go!*	■ Students will be able to demonstrate five activities designed to assess their level of fitness.
Lesson 4	*In a Heartbeat*	■ Students will be able to synthesize a plan to improve aerobic capacity.
Lesson 5	*Looking Good—Feeling Good*	■ Students will be able to analyze ways to improve body composition, flexibility, muscular strength and endurance.
Lesson 6	*Be Prepared*	■ Students will be able to identify common myths associated with fitness.

- Students will be able to describe factors that influence the success of a fitness program.
- Students will be able to analyze fitness facilities in the community.

Lesson 7 *Putting It All Together*

- Students will be able to identify personal goals for fitness.
- Students will be able to evaluate the effectiveness of a personal fitness plan.

Time

The time indicated for each lesson is an approximate measure, based on a 45-50 minute class period. The actual time required to complete all activities in a given lesson will vary, depending on student interest and ability. Lessons that will probably require more than one class period to complete are indicated.

Instructional Strategies

This module incorporates a variety of instructional strategies designed to develop and maintain student interest and motivation. Some of the strategies are traditional, while others are more interactive, encouraging students to help each other learn. An alphabetical list of instructional strategies and their descriptions follows:

Brainstorming
Case Studies
Class Discussion
Cooperative Learning Groups
Interviewing
Overhead Transparencies
Teacher Lecture
Worksheets

Brainstorming

Brainstorming is used to stimulate discussion of an issue or topic. Students are asked to give their ideas and opinions without comment or judgment from the teacher or other students. Ideas can be listed on the chalkboard, on butcher paper or newsprint, or on a transparency. Brainstorming should continue until all ideas have been exhausted or a predetermined time limit has been reached.

Case Studies

A case study is a story that can be analyzed and from which learning can occur. Case studies provide an interesting way to present content and encourage student involvement.

Class Discussion

A class discussion led by the teacher is one of the most valuable strategies used in education.

It can be used to initiate, amplify or summarize a lesson. Most of the lessons in this module include some form of class discussion.

Cooperative Learning Groups

Cooperative learning is another common and effective strategy used in this module. Students work in small groups to share information, analyze ideas or solve problems. The size of the group depends on the nature of the lesson and the make-up of the class. Groups work best with two to six members.

Group structure will affect the success of the lessons. Groups can be formed by student choice, random selection or a more formal, teacher-influenced process. Groups seem to function best when they represent the variety and balance found in the classroom. Groups also work better when each student has a responsibility within the group (reader, recorder, timer, reporter, etc.).

While groups are working on their tasks, the teacher should move from group to group, answering questions and dealing with any problems that arise. At the conclusion of the group process, some closure should take place.

Interviewing

In the quest for information on a topic, it is sometimes helpful to interview others (family members or friends) outside of class.

Overhead Transparencies

Overhead transparencies are an effective visual aid to use in presenting information and graphic examples. Most of the lessons in this module provide teacher resources that can be used as transparencies.

Teacher Lecture

A traditional teacher lecture disseminates information directly from the teacher to students. In some lessons, this approach is the best way to provide information. Generally, this method is combined with other methods to assure high-level motivation and learning.

Worksheets

Most lessons in this module include worksheets. Students may be asked to complete the worksheets individually or in cooperative learning groups. Some worksheets include an activity to be completed outside of class. Completed worksheets should generally be reviewed with the whole class to provide relevant and timely feedback.

Evaluative Methods

Each lesson provides the teacher with one or more methods for evaluating student performance on stated objectives. The methods are listed following the procedure section of each lesson. Evaluative methods include analysis and comment on worksheets and other written

materials, as well as observation of individual responses.

It is impossible to objectively, quantitatively or qualitatively measure the development and maintenance of individual fitness, and it is inappropriate to grade student work that is reflective of individual feelings, beliefs or behaviors. Therefore, the evaluation methods serve as tools to assess students' participation and cognitive learning from each lesson.

LESSON 1

THE MEANING OF FITNESS

Objectives

Students will be able to list three benefits of fitness.

Students will be able to describe the elements of fitness.

Time

One or two class periods.

Overview

Students begin the module by brainstorming about the meaning of fitness. The benefits of fitness are explored in the context of personal gains, and students are asked to select the benefits they would most like to incorporate into their lives. After discussion of the elements of fitness, students complete an inventory to determine their present levels of physical activity.

Additional assignments encourage students to visit and evaluate local fitness facilities and to interview someone who exercises regularly. Students will report on these activities in a later lesson.

Teacher Materials and Preparation

HAVE:

✓ Overhead projector.
✓ Blank transparency and marking pen *or* chalk and chalkboard.

COPY:

✓ **Fitness Is...** worksheet, one for each student.
✓ **Benefits of Fitness** worksheet, one for each student.
✓ **Fitness Facts** worksheet, one for each student.
✓ **Fitness Choice Inventory,** one for each student.
✓ **Membership Fitness Facility Survey,** one for each student volunteer.
✓ **Public Fitness Facility Survey,** one for each student volunteer.
✓ **Fitness Interview** worksheet, one for each student volunteer.

MAKE:

✓ Transparency of **Fitness Is...** ***Example***
✓ Transparency of **Elements of Fitness**.

REVIEW:

✓ **Elements of Fitness** ***Teacher Background Information***.

Key Points

➤ We each choose our own level of physical activity.
➤ Fitness offers many physical, mental and social benefits.
➤ Aerobic capacity, body composition, flexibility, muscular strength and endurance are the elements of fitness.

Procedure

■ Tell students that they make choices every day that determine their level of fitness. Explain that fitness continually changes in response to health behaviors such as diet and physical activity.

Ask students what fitness means to them. Suggest that fitness enhances our ability to meet the demands of daily living, cope with unexpected extra demands, have a realistic but positive self-image and protect against health problems.

■ Distribute the **Fitness Is...** worksheet, and show students a transparency of **Fitness Is...** ***Example***. Ask students to brainstorm

words that come to mind when they think about fitness. Explain clustering, and allow students time to complete the worksheet.

When students have completed their clusters, ask them if any of the terms they have written refer to the benefits of fitness (e.g., fun, healthy, feel good, look good). List student responses on a blank transparency or the chalkboard.

Ask students to add any additional benefits related to fitness. The completed list could include:

Stronger heart muscle
Stress management
Improved self-esteem
More energy
Lower cholesterol level
Fewer injuries
Stronger bones
Improved complexion
Improved mental ability
Weight control
Sleep better
Improved appearance
Fewer diseases
Improved digestion
More positive outlook
Improved muscle tone
Improved self-confidence

■ Distribute the **Benefits of Fitness** worksheet. Tell students to choose the three benefits of fitness that they would most like to include in their own lives. Have students fill in these benefits on the worksheet and rank them from one (1) to three (3), with one (1) being the most desirable.

Then tell students to answer the questions that follow. Ask for volunteers to share their responses with the class.

■ Explain that in order to experience the benefits of fitness, a person must be fit; therefore, an understanding of the elements of fitness is necessary. Distribute the **Fitness Facts** worksheet, and show students the **Elements of Fitness** transparencies.

Use ***Teacher Background Information*** on the elements of fitness to present a mini-lecture. Tell students to write on the worksheet, in their own words, the definition of each element as you explain the meaning of the terms.

■ Explain that physical activity is the route to fitness. Distribute the **Fitness Choice Inventory**. Tell students this inventory will help them evaluate their current level of physical activity. Tell students to answer the questions and score their responses.

Lead a class discussion about the choices people make regarding activity levels. Ask students the following questions:

- Was your score higher or lower than you expected?
- Are you pleased with your score?
- Are there some easy ways to get more physical activity in your life? (walk to and from school, take the stairs instead of the elevator)
- What activities contribute the most physical activity to your daily life?

■ Have students volunteer to call or visit a local fitness facility. These can usually be located in the phone book under *Health Clubs*. Be sure to coordinate student efforts, so a variety of facilities are covered, and no single facility is deluged with student calls or visits. Distribute a **Membership Fitness Facility Survey** to each of the volunteers and ask if they have any questions about how to conduct the survey.

Ask for other volunteers to survey a fitness facility available to the public in the community. Public facilities may include community centers, public schools or local colleges, parks and fitness trails. Be sure to coordinate student efforts, so a variety of facilities available in the community are covered. Distribute a **Public Fitness Facility Survey** to each of the volunteers and ask if there are any questions about how to conduct the survey.

■ Ask for student volunteers to interview an individual who has exercised regularly for at least one year. Be sure there is some variety among individuals who are interviewed with respect to age, gender and type of exercise (for example, a person over age 60, a mother of a preschooler, a fireman or farmer who must maintain a certain level of fitness for job performance). Distribute a **Fitness Interview** worksheet to each of the volunteers and ask for questions about how to conduct the interview.

Tell volunteers that the surveys and interviews will be due at the time of Lesson 6.

Evaluation

Check students' lists of benefits on the **Benefits of Fitness** worksheet.

Evaluate student responses on the **Fitness Facts** worksheet for their ability to describe each of the elements of fitness.

Elements of Fitness

Teacher Background Information

Physical fitness has emerged as one of the primary components of good health. Aerobic capacity, body composition, flexibility, muscular strength and endurance are the main elements of fitness. Each of these elements can be enhanced by a regular exercise program.

Aerobic Capacity

Aerobic capacity is the foundation for whole-body fitness. It is the body's ability to take in and use oxygen so that muscles can keep going. The level of aerobic capacity depends on the ability of the heart muscle and lungs to supply oxygen to the cells in the body and the ability of the cells to efficiently use the oxygen and to eliminate carbon dioxide.

Most experts agree that aerobic capacity is the most important element of fitness. Engaging in aerobic exercise on a regular basis is the best way to enhance aerobic capacity. By enhancing this element of fitness, you improve the efficiency of the heart muscle and lungs, in addition to all of the other muscles in the body.

Currently, cardiovascular diseases (heart attack, stroke, atherosclerosis) are the leading cause of death for Americans. Research shows that individuals who engage in a regular exercise program that improves aerobic capacity can reduce their risk of developing these diseases. Starting an exercise program is especially important for young people, because scientists have discovered that cardiovascular diseases begin during youth.

Body Composition

Body composition refers to the ratio of body fat to lean tissue (muscle, bone and internal organs). For good health, the body should have a proper ratio of one to the other. Body fat consists of two types: essential (brown) and storage (yellow). Essential fat is found in the vital organs, such as the lungs, heart, liver, spleen, kidneys and intestines. This fat protects these organs from injury and aids in important body processes. Storage fat accumulates around the internal organs, within muscle tissue and under the skin. Too much storage fat has been linked to cardiovascular disease, diabetes, cancer and arthritis.

Flexibility

Flexibility is the ability of joints to move through their full range of motion. This movement at the joints enables you to bend, touch your toes or rotate your body. Flexibility is influenced by sex

(females are more flexible than males), age, posture and amount of fat and muscle. You become more flexible until adolescence, when the levels of flexibility begin to decline.

Flexibility depends on the elasticity of the muscles, connective tissues (tendons and ligaments) and the condition of the joints. If flexibility is maintained, the body can move and bend instead of becoming injured in response to movements. In addition, the movements of flexible bodies are graceful and attractive. Flexibility improves in response to stretching.

Muscular Strength and Endurance

Muscular strength refers to the ability of the muscles to work—for example, to push a stalled car or to pick up a heavy load. Muscular endurance is the power of a muscle to keep on going. Muscular strength and endurance are necessary for everyday tasks, like mowing the yard or playing basketball.

Well-conditioned muscles work more smoothly and with less effort. The muscle tissue is firmer and can withstand more strain. Muscles never stay the same. If they are not used, they break down. If you exercise vigorously and regularly, they grow stronger.

STUDENT

Fitness Is...

Directions: Look at the word *Fitness* in the center of the page. Brainstorm some words that come to mind when you think of fitness. Write these words around the word *Fitness*. Circle each word you write and draw lines and arrows to connect the words. Write down all the words you think of—don't try to decide if they're good or bad.

TEACHER

Fitness Is...

Example

Directions: Look at the word *Fitness* in the center of the page. Brainstorm some words that come to mind when you think of fitness. Write these words around the word *Fitness*. Circle each word you write and draw lines and arrows to connect the words. Write down all the words you think of—don't try to decide if they're good or bad.

STUDENT

Benefits of Fitness

Directions: Fill in the three benefits of fitness that are most important to you. Rank them in order of importance—1 is most important, 3 is least. Then answer the questions that follow.

Benefits of Fitness

1.

2.

3.

4. Why did you choose these benefits?

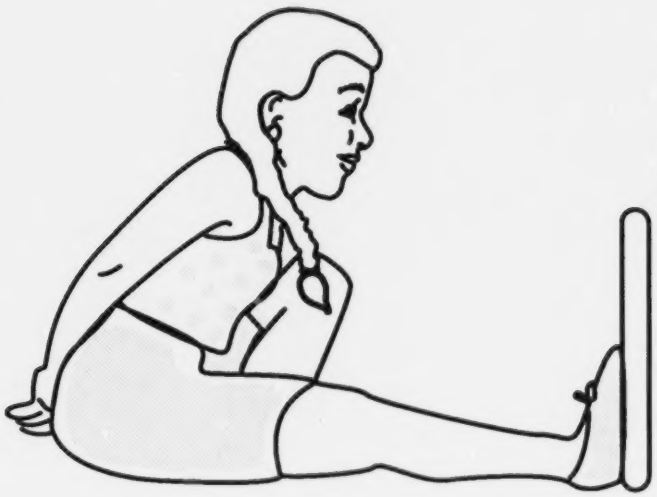
5. How would these benefits improve your life?

TEACHER

Elements of Fitness

Aerobic Capacity
The body's ability to take in and use oxygen so muscles can keep working.

Body Composition
The classification of body weight by ratio of fat to lean tissue.



Flexibility
The ability of joints and muscles to move through their full range of motion.

Muscular Strength and Endurance
The ability of muscles to work and to keep on working.

STUDENT

WELLPOWER Winners

Directions: List the five Wellness Action Items. Then describe one Wellpower Winner for each item. The Wellpower Winner should be an action or choice that improves health (moves you toward your wellness potential).

1. Wellness Action Item_____

   Wellpower Winner_____

   _____

2. Wellness Action Item_____

   Wellpower Winner_____

   _____

3. Wellness Action Item_____

   Wellpower Winner_____

   _____

4. Wellness Action Item_____

   Wellpower Winner_____

   _____

5. Wellness Action Item_____

   Wellpower Winner_____

   _____

STUDENT

WELLPOWER Action Plan

Example

Personal Wellness Goal

Eat a healthy breakfast daily for two weeks.

Obstacles

1. ***I get up too late.***
2. ***I don't like to eat breakfast because I don't feel hungry.***
3. ***I don't like breakfast foods.***

Wellpower Action Steps

1. ***Set the alarm for 20 minutes earlier than I usually wake up.***
2. ***Think of some foods I do like that I could eat for breakfast.***

Support System:

- ***I will tell my class partner each day about what I ate for breakfast.***
- ***I will talk to my family about foods I could eat for breakfast.***

Reward

- ***Breakfast at a restaurant.***
- ***Plan a special event with a friend.***

LESSON
3

PERSONAL HEALTH BEHAVIORS

Objective

Students will be able to identify steps to take to meet a personal health behavior goal.

Time

One class period.

Overview

Developing and practicing daily health habits is important for young adolescents. These personal health behaviors contribute to overall wellness by helping students both look and feel better.

In this lesson, students consider how behaviors become habits. Students review some recommended daily personal health habits. They then work with their wellpower partners to choose one health behavior they would like to improve and complete an action plan for reaching their goal.

Instructional Strategies

Class discussion, dyad discussion, teacher lecture, worksheets.

Teacher Materials and Preparation

HAVE:

✓ Chalk and chalkboard.
✓ Overhead projector.

COPY:

✓ **Personal Health Behaviors** student information sheet, one for each student.
✓ **Personal Health Behaviors Wellpower Action Plan,** one for each student.

MAKE:

✓ Transparency of **Wellpower Personal Health Behaviors**.

Procedure

■ Write the word HABIT on the board and enlist student response on the meaning of the word. After students have offered their opinions, explain that habits are behaviors that are often done automatically (without consciously thinking about it).

Ask students what they think health habits are. Ask for examples of health habits. Remind students that they have been learning about health habits from a very young age. Explain that we have all learned how to dress ourselves, feed ourselves, bathe, shampoo our hair and brush our teeth.

Some of these health practices have actually become habits. Most of us don't have to think about how to tie our shoes, we just do it. This has become a habit. On the other hand, we may still have to remember to brush our teeth, and flossing may be a skill we have not yet mastered.

Habits are developed through repetition of behavior that is reinforced (rewarded). Reinforcement for habits may come from a variety of sources, including approval from parents or peers, self-satisfaction or enjoyment, or external rewards. Habits can be

changed through the following steps:

- Become aware of your desire to change a specific habit.
- Substitute and practice the new behavior.
- Eliminate the old behavior.
- Reinforce or reward your new behavior.

■ Show students the **Wellpower Personal Health Behaviors** transparency. Distribute the **Personal Health Behaviors** student information sheet. Explain that we have chosen to call these items health behaviors, not habits, because they may in fact not yet be habits. They may be behaviors that we want to become habits, because then we will do them automatically. Review each behavior on the transparency, using the information on the student sheet.

Optional: If time allows, let students practice flossing teeth. This health behavior requires some practice. Give each student a piece of dental floss, and have students practice wrapping the floss around their fingers. If possible, students should look in a mirror to see if they are practicing the technique correctly.

If time or circumstances do not allow students to practice flossing in class, make flossing a homework assignment. Have students write a paragraph about when they did it and how easy or hard it was to do.

■ Have students meet with their wellpower partners at this time. Pass out the **Health Behaviors Wellpower Action Plan**. Point out that that this is the same as the plan that was described and discussed in Lesson 2. Students should identify an action item or choice that they want to work on in the area of health behaviors.

This can be as simple as getting eight hours of sleep each night or brushing teeth twice a day or flossing once a day. Students need to write down a goal they personally want to work on.

With the help of their wellpower partners, students should develop plans to reach their goals. Tell students they will be meeting with their goal partners daily to discuss their progress on their goals.

■ *Optional:* Have students complete the **Health Styles Survey** from Lesson 8 now and again at the end of the unit and compare their scores.

Evaluation

Look over student goal plans to see if they have been able to describe a way to evaluate their progress in meeting a personal health behavior goal. Assess student ability to identify the steps necessary to meet a specific goal.

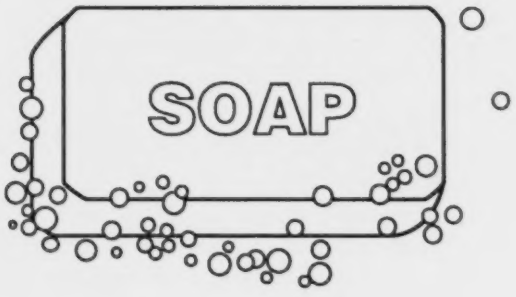
TEACHER

WELLPOWER
Personal Health Behaviors

1. Brush teeth twice a day.

2. Floss teeth once a day.

3. Bathe or shower.

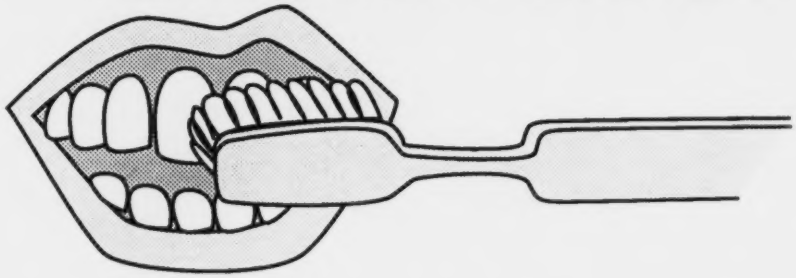


4. Shampoo hair.

5. Get enough sleep.

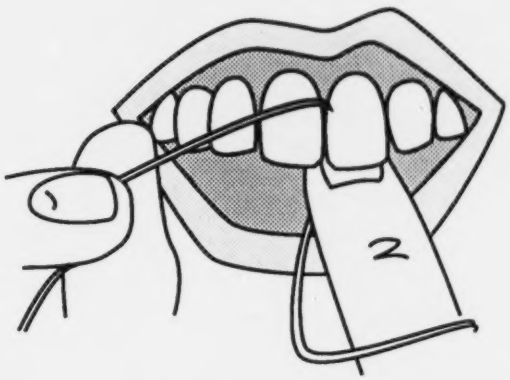
STUDENT

Personal Health Behaviors



1. **Brush teeth twice a day**. Brushing and flossing remove plaque. Plaque is a thin, sticky film that forms on your teeth. If plaque isn't removed regularly, it causes tooth decay and other dental problems. Use a soft toothbrush to clean the surfaces of your teeth, as shown in the picture. Toothpaste helps clean your teeth and freshen your breath.

2. **Floss teeth regularly** (daily or at least every other day). Dental floss removes plaque and food particles between the teeth and around the gums where your toothbrush can't reach.



3. **Bathe or shower regularly**. Regular baths or showers with soap remove dirt and oils that can cause odors and germs that can cause disease. Cleanliness—and good nutrition—can also help reduce complexion problems such as acne.

4. **Shampoo hair regularly**. Shampooing removes dirt and oils from hair. Clean hair shines and makes you look and feel better.

5. **Get enough sleep**. Most students your age need eight to ten hours of sleep a night. Adequate sleep helps you feel better, be more alert and manage stress. It's also important for growth.

STUDENT

Personal Health Behaviors

WELLPOWER Action Plan

Personal Wellness Goal

_____

Obstacles

_____

_____

_____

Wellpower Action Steps

_____

_____

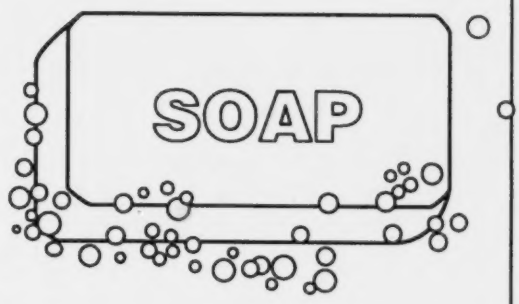
_____

Support System

_____

_____

_____



Reward

_____

_____

LESSON 4

FITNESS FOR WELLPOWER

Objectives

Students will be able to identify the health-related components of fitness.

Students will be able to describe ways to incorporate fitness activities into daily life.

Time

Two class periods.

Overview

Physical fitness is important for overall wellness. Exercise tones muscles, strengthens the heart and improves lung capacity. Exercise can also be an effective stress reducer and provide opportunities for enjoyable social interaction. Participation in fitness activities promotes all three health dimensions—physical, mental/emotional and social.

In this lesson, students consider some ways that exercise and fitness contribute to wellpower. Students practice checking their pulse rate during exercise, and brainstorm some examples of exercise. They then work with their wellpower partners to complete a fitness action plan and review their progress on the health behavior goal.

Instructional Strategies

Class discussion, dyad discussion, teacher lecture, worksheets.

Teacher Materials and Preparation

HAVE:

- ✓ Chalk and chalkboard.
- ✓ Overhead projector.
- ✓ Watch or clock with second hand.

COPY:

- ✓ **Measuring Pulse Rates** worksheet, one for each student.
- ✓ **Fitness Wellpower Action Plan,** one for each student.

MAKE:

- ✓ Transparency of **Fitness Factors**.
- ✓ Transparency of **Taking a Pulse**.

Procedure

■ Write the word FITNESS on the board. Tell students that fitness is an important part of wellness. The activities we choose to participate in can help us improve our wellness. Ask students for examples of activities that improve fitness. Note their responses on the board.

■ Tell students that regular exercise can contribute to fitness in five ways. Show students the **Fitness Factors** transparency, and review each of the factors with students.

- *Flexibility*—The ability to move muscles to their full extent. Flexibility can be improved by careful stretching. Flexibility can prevent the aches and pains of sore muscles.

- *Muscular Strength*—Muscles' ability to apply force. Muscular strength can help prevent injuries, e.g., back injuries.
- *Muscular Endurance*—Muscles' ability to apply force for a period of time without getting tired. Increased muscle strength helps you lift more; good endurance helps you lift longer.
- *Cardiovascular Fitness*—The heart and lungs' ability to take in and use oxygen.
- *Body Composition*—Describes how much of body weight is fat, as compared to muscle and bones. Regular exercise can help control the amount of body fat and build strong and firm muscle.

■ Ask students which of the activities they listed earlier they think would improve each factor. Write student ideas on the transparency. Examples may include the following activities:

- Flexibility—ballet, gymnastics, judo, karate
- Muscular Strength—football, weight lifting
- Muscular Endurance—basketball, soccer, surfing, skiing
- Cardiovascular Fitness—aerobic dancing, jogging, swimming
- Body Composition—ballet, basketball, brisk walking, tennis

■ Tell students that to improve cardiovascular fitness, the activity or exercise should make the heart work harder. One way to measure how hard your heart is working is to check your pulse rate to see how fast your heart is beating.

Show students the **Taking a Pulse** transparency. Demonstrate the correct position of fingers. Right-handed people should use the first two fingers of the right hand to count the pulse in the carotid artery on the left side of the throat.

To find the pulse, tilt your head slightly back and to one side. Slide two fingers into the groove beside the Adam's apple just below the jaw. Never use your thumb, as it has a pulse of its own. *Note:* Caution students to be very careful when counting a neck pulse. Too much pressure applied to the carotid artery can decrease blood flow and cause fainting.

The pulse can also be found in the wrist, on the thumb side. Again, right-handed people should use the first two fingers of the right hand to count the pulse in the left wrist. Don't use your thumb or rest it on the wrist.

Now have students practice taking their own pulse. Be sure students are using their fingertips. Have students count the pulse for 10 seconds and multiply by 6. Have students practice taking a pulse until they get the same rate (or within a few beats of it) three times in a row. This is a *resting pulse rate*.

■ Distribute the **Measuring Pulse Rates** worksheet. Tell students to fill in the resting pulse rate they have just practiced finding.

Explain to students that activities that will help strengthen the heart and improve lung capacity are called aerobic exercises. To obtain maximum cardiovascular benefits, a young person's heart rate should be increased to the 135-168 beats per minute range for 10 to 20 minutes at least three times a week.

Tell students they are going to see what happens to their heart rate with exercise. Time students as they run in place for one minute. Have students check their pulse rate immediately and record it on the worksheet in Step 3.

Continue checking pulse rates at two-minute intervals for ten minutes, and have students record their pulse rates at each interval in Step 4. Tell students to complete the remaining statements on the worksheet.

Ask how many students returned to their resting pulse rate in ten minutes. Discuss other student responses to the activity.

■ Point out to students that many different activities can contribute to fitness. Recent studies indicate that even short (ten-minute) exercise periods can improve fitness, if the exercise is done regularly. Ask students for ideas of ways to include exercise in everyday activities. List these on the board. They may include the following:

- Ride a bike or walk to school or to a friend's house.
- Take the stairs instead of the elevator.
- Mow the lawn with a push mower.
- Do housework—vacuum, mop or sweep.

■ Tell students to meet with their wellpower partners. Distribute the **Fitness Wellpower Action Plan** worksheet. Tell students to pick a fitness goal to work on over the next few weeks. Students can work with their partners to develop a plan to reach the goal.

When students have developed their fitness goals, tell them to discuss their progress on the health behavior goals they identified in the previous lesson. Tell students to keep their action plans to review their progress during the remainder of the module.

Evaluation

Have students create a poster that shows an activity that contributes to fitness that can be incorporated into daily life. Students can also develop slogans that encourage daily fitness activities.

Have students list the five factors for fitness. Assess student understanding of fitness by reviewing the list and poster.

TEACHER

Fitness Factors

Flexibility

Muscular Strength

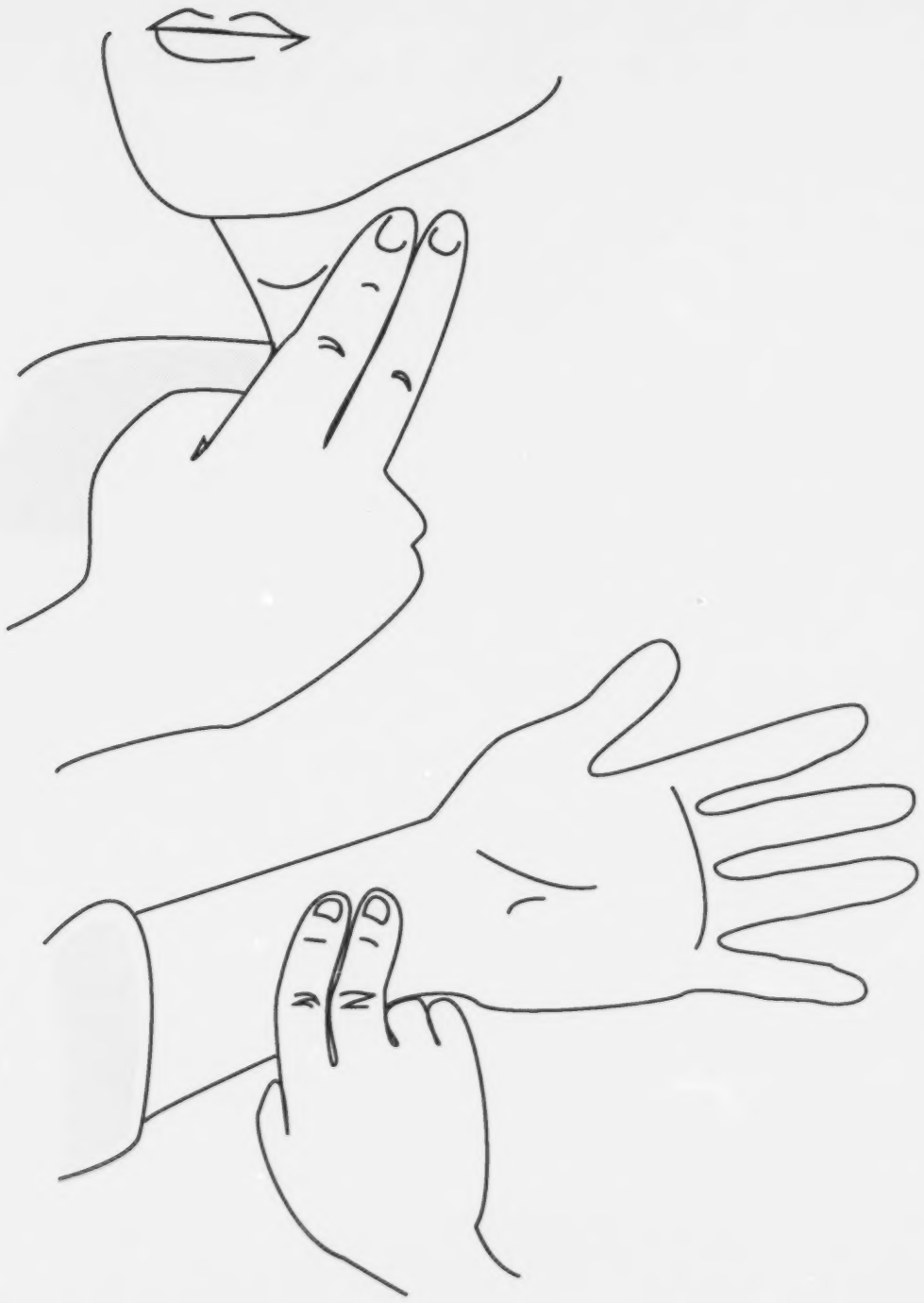
Muscular Endurance

Cardiovascular Fitness

Body Composition

TEACHER

Taking a Pulse



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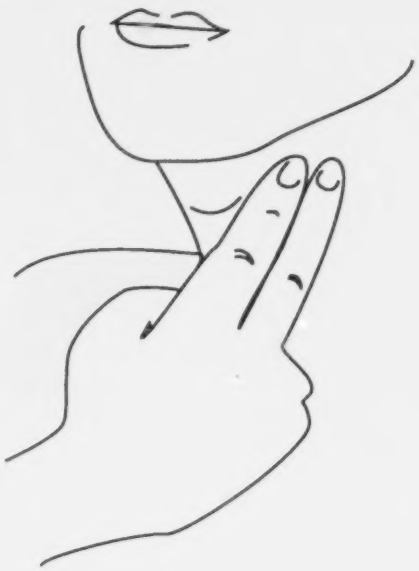


Measuring Pulse Rates

Directions: Fill in your pulse rates as the teacher directs in steps 1-4. Then complete the statements that follow.

Steps

1. Take the *resting pulse rate* for ten seconds. Multiply the rate by six and record it here.
   _____
2. Run in place for one minute.
3. Take the pulse rate again for 10 seconds. Multiply the rate by six and record it here.
   _____
4. Continue to take the pulse rate at two-minute intervals for ten minutes. Record it each time. (Note that the rate will slowly subside and return to the resting rate—the first recorded pulse rate—in approximately ten minutes.)
   _____ 2 minutes _____ 4 minutes _____ 6 minutes

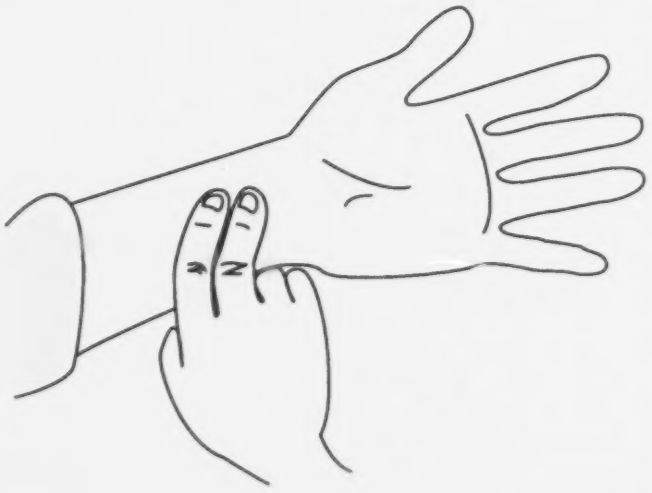
   _____ 8 minutes _____ 10 minutes

My pulse rate before exercise was _____ beats per minute.

My pulse rate immediately after exercise was _____ beats per minute.

My pulse rate 10 minutes after exercise was _____ beats per minute.

Exercise that increases your heart rate to the 135-168 beats per minute range offers the most benefit for your heart and lungs.



STUDENT

Fitness

WELLPOWER Action Plan

Personal Wellness Goal

_____

Obstacles

_____

_____

_____

Wellpower Action Steps

_____

_____

_____

Support System

_____

_____

_____

Reward

_____

_____

_____

LESSON 5

NUTRITION FOR WELLPOWER

Objectives

Students will be able to describe a menu that represents a nutritious meal.

Students will be able to identify steps involved in a personal nutrition goal.

Time

One or two class periods.

Overview

Although students may be aware of the need for nutrition, they may not practice healthy eating habits. Some unhealthy habits of students this age include skipping breakfast, eating foods high in sugar and eating snack foods that are high in salt and fats.

In this lesson, students study six major nutrients and the four food groups and work in small groups to create healthy breakfast menus. Students also consider some general guidelines for health-

ful eating. They then work with their wellpower partners to choose a goal to improve their nutrition.

Note: One lesson cannot provide a comprehensive look at nutrition. For additional information on nutrition, see another module in the **Contemporary Health Series,** *Into Adolescence: A Menu for Good Health* (1991), also available from ETR Associates/Network Publications.

Instructional Strategies

Class discussion, cooperative learning groups, dyad discussion, teacher lecture, worksheets.

Teacher Materials and Preparation

HAVE:

- ✓ Chalk and chalkboard.
- ✓ Overhead projector.

COPY:

- ✓ **Wellpower Nutrients** student information sheet, one for each student.
- ✓ **Wellpower Vitamins** student information sheet, one for each student.
- ✓ **What Is a Serving?** student information sheet, one for each student.
- ✓ **Breakfasts for Wellpower** worksheet, one for each student.
- ✓ **Nutrition Wellpower Action Plan,** one for each student.

MAKE:

- ✓ Transparency of **Wellpower Nutrients**.
- ✓ Transparency of **Wellpower Vitamins**.
- ✓ Transparency of **What Is a Serving?**
- ✓ Transparency of **Wellness Eating Behaviors**.

Procedure

■ Write the word NUTRITION on the board. Tell students that nutrition is another important factor that affects health status and overall wellness. The choices we make about what foods to eat

affect our health in many ways. One of the most important things we can do to improve our nutrition is to eat a variety of foods daily.

■ Distribute the **Wellpower Nutrients** student information sheet, and show students a transparency of the sheet. Identify the six major nutrients. Discuss the importance of each nutrient for the maintenance of body functions. Ask students for examples of their favorite foods that can supply each of the major nutrients.

■ Distribute the **Wellpower Vitamins** student information sheet, and show students the transparency. Discuss the importance of vitamins to good nutrition. Emphasize the importance of eating a variety of foods for good health.

■ Tell students that one way to check that we are getting the foods we need for wellpower is to look at the four food groups—milk, meats or protein, fruits and vegetables, breads and cereals. Distribute the **What Is a Serving?** student information sheet, and show students the transparency. Review the recommended servings and sizes.

■ Divide the class into small groups. Distribute the **Breakfasts for Wellpower** worksheet. Tell students to create four wellpower breakfasts, being sure to include servings from each food group. You may want to let the class vote on its favorite wellpower breakfast. Students may wish to prepare and taste their healthy breakfasts.

■ Tell students that studies indicate that a healthy diet can help prevent many diseases, including heart disease and some kinds of cancer. Students can increase their wellness potential by learning and practicing good nutrition behaviors.

Show students the **Wellness Eating Behaviors** transparency. Explain that in addition to eating a variety of foods from the four food groups, students should consider these general guidelines to making nutritious choices.

Lead a class discussion of the health effects of each of these choices. Be sure to include the following points.

- Too much salt may contribute to high blood pressure.
- Too much fat in the diet may cause heart disease.
- Sugar promotes tooth decay; sugary foods usually have little nutritional value.

- A high fiber diet may help prevent certain diseases, including some kinds of cancer.

Ask students to suggest some healthy snacks that follow these guidelines.

■ Tell students to meet with their wellpower partners. Distribute the **Nutrition Wellpower Action Plan** worksheet. Tell students to choose a nutrition goal to work on. Partners should help each other plan the steps they will take to achieve their goal. At this time, students can also review their progress on their health behavior and fitness goals.

Evaluation

Observe student work in groups to determine their ability to describe a nutritious menu. Review students' **Nutrition Wellpower Action Plan** for their success in identification of steps to take to achieve a specified nutrition goal.

Follow-Up/ Extension

Have students assess their food intake over a 3-day period. Then they can identify the food groups from which they need to eat more servings.

privacy. However, all students should be encouraged to participate as fully as possible.

Instruct students to record their scores for each assessment on the **Assess Your Fitness** worksheet. Remind students to bring the completed **Assess Your Fitness** worksheets to the next class.

Evaluation

Check the **Assess Your Fitness** worksheet for student scores for each of the fitness activities. Observe students throughout the lesson to assess their participation level and their ability to demonstrate each activity.

Conducting the Personal Fitness Assessment

Teacher Background Information

It is easier to move students through all activities in one or two class periods if you divide the class into groups and move students through the assessments in a round-robin fashion.

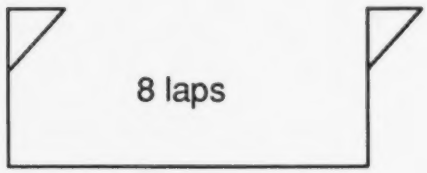
Set up a station for each of the five assessments. Enlist the help of students or other teachers to serve as supervisors for each of the stations. Point out that some students will be sensitive about their performance on the assessments. Ask supervisors to encourage students' participation, but emphasize the importance of being sensitive to their feelings.

Note: Be sure that students with known medical problems that would contraindicate vigorous exercise do not take the tests.

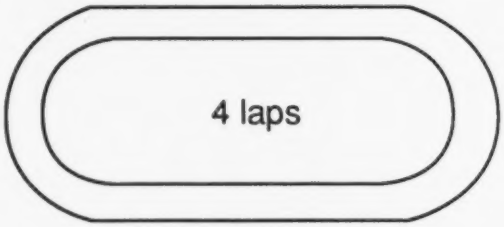
Aerobic Capacity

One Mile Walk/Run

Equipment: A stop watch or watch with a sweep second hand. The one mile walk/run can be administered on a 440-yard or 400-meter track or on any other flat measured area.



110 yds.



440 yds.

Before the test: Allow students to participate in practice runs. Emphasize the concept of pace. Results are better if students maintain a constant pace during most of the test, walking only if necessary. Have students engage in warm-up activities such as stretching, walking and jogging before the test.

Description: Tell students to run one mile in the fastest possible time. The students begin on the signal, "Ready, start." As students cross the finish line, elapsed time should be called to the participants or their partners.

Have students engage in cool-down activities such as walking and stretching after the test.

Body Composition

Sum of Skinfolds

Equipment: Skinfold calipers. (See listing of materials in appendix.)

Before the test: Have students wear short-sleeved shirts and shorts for the assessment.

Description: Instruct the student to stand erect with the right arm relaxed and the palm facing the leg. Measure the triceps skinfold midway between the elbow and the shoulder by grasping the skinfold between the thumb and index finger. Lift the skinfold with your thumb and index finger 1/2" above the midpoint of the arm and place the calipers at the midpoint of the arm (below your fingers).

Have the student place the right foot on a bench with the knee flexed. Measure the calf skinfold on the inside of the lower right leg by grasping the skinfold slightly above the level of the largest part of the calf. The calipers are then placed at the level of the widest part of the calf.

Measure each skinfold site three consecutive times and record the middle (median) score. Add the calf and triceps skinfolds to determine the final score.

Flexibility

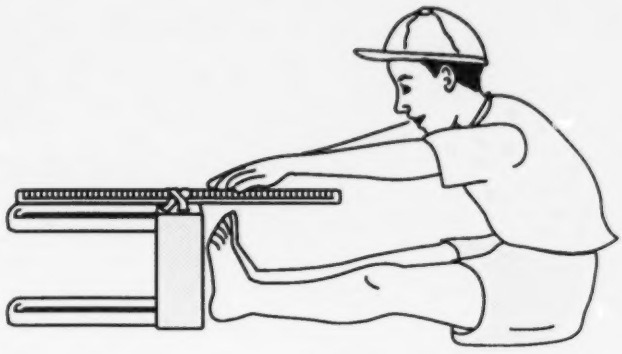
Sit and Reach

Equipment: Obtain or construct an apparatus with a centimeter measuring scale. (See diagram and instructions for Sit and Reach Apparatus list of materials in appendix.)

Before the test: Have students warm up by performing slow, sustained stretches of the low back and posterior thighs.

Place the apparatus against an immovable object (for example, a wall) to prevent it from moving away from the student during the test.

Description: Instruct the student to remove his or her shoes and sit in front of the apparatus with the legs fully extended and the feet shoulder-width apart. Have a monitor place his or her hands lightly across the knees to prevent flexing during the test. The feet should be flat against the end board and the arms extended forward with the hands placed on top of one another.



The student must reach forward with the palms down along the measuring scale four times, holding the position of maximum reach on the fourth trial. The position must be held for one second.

Repeat the test if the hands reach out unevenly or the knees flex during the trial.

Muscular Strength and Endurance

Sit-Ups

Equipment: Mats or other comfortable surfaces.
A stop watch or watch with a sweep second hand.

Description: Have the student lie on his or her back with the knees flexed and the feet on the floor. The heels should be between 12 and 18 inches from the buttocks. The arms are crossed on the chest with the hands on the opposite shoulders. The chin remains tucked toward the chest. The feet are held by partners to keep them on the testing surface.

The student tightens his or her abdominal muscles to curl into the sitting position. The sit-up is completed when the student returns to the down position (the midback makes contact with the testing surface) after his or her elbows have touched the thighs.

The timer gives the signal, "Ready, go." The sit-up performance begins on the command go. After 60 seconds, performance is ended on the command stop. The number of sit-ups performed correctly in 60 seconds is the score. Students may rest between sit-ups; however, the objective is to perform as many sit-ups as possible in the 60-second period.

Note: It is important that the heels are placed 12-18 inches from the buttocks and that sit-ups are done correctly.

Pull-Ups

Equipment: A metal or wooden bar approximately 1 1/2" in diameter.

Description: Have the student begin by hanging from a bar with his or her arms fully extended. The feet should not touch the floor, and an overhand grip should be used. From the hanging position, the student raises his or her body until the chin is over the bar. The student should perform as many correctly executed pull-ups as possible. There is no time limit.

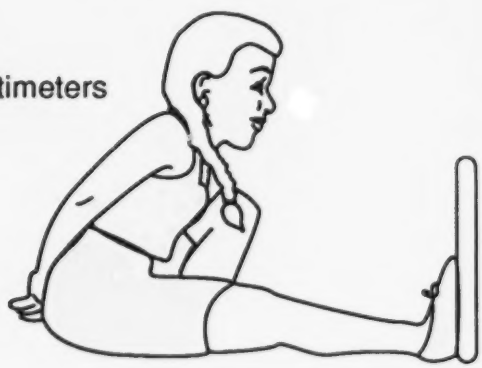
STUDENT

Assess Your Fitness

Aerobic Capacity
One Mile Walk/Run
time—____:____ (minutes:seconds)

Body Composition
Sum of Skinfolds
triceps _____mm + calf _____mm = _____mm total

Flexibility
Sit and Reach
_____centimeters



Muscular Strength and Endurance
Sit-Ups
number performed _____

Pull-Ups
number performed _____

LESSON 4

IN A HEARTBEAT

Objective

Students will be able to synthesize a plan to improve aerobic capacity.

Time

One class period.

Overview

In this lesson, students use their personal performance on measurements of aerobic capacity, body composition, flexibility, muscular strength and endurance to assess their individual levels of fitness. The lesson also provides an opportunity for students to discover ways to improve aerobic capacity. Students participate in an aerobic workout and develop a personal plan to maintain aerobic fitness.

Teacher Materials and Preparation

HAVE:

- ✓ Overhead projector.
- ✓ Exercise mats or other comfortable surface.
- ✓ Cassettes of popular music and cassette player *or* an aerobic dance video and video cassette player.
- ✓ A pencil for each student.

MAKE:

- ✓ Transparency of **How Fit Are You?**
- ✓ Transparency of **Aerobic Prescription**.

REVIEW:

- ✓ **Improving Aerobic Capacity** ***Teacher Background Information***.

INSTRUCT:

- ✓ Students to bring to class the **Assess Your Fitness** worksheet, completed during Lesson 3.
- ✓ Students to wear clothing and shoes for exercising.

Key Points

- ➤ Assessing the elements of fitness can give insight into individual strengths and weaknesses.
- ➤ Aerobic capacity can be increased by regularly participating in activities that place demands on the heart and lungs.

Procedure

■ Begin the lesson by referring to the **Assess Your Fitness** worksheet from Lesson 3. Show students the **How Fit Are You?** transparency. Tell students to compare their scores on each of the activities with the fitness measurements on the transparency.

Explain that walking/running the mile in less time, reaching farther on the sit and reach and performing more sit-ups or pull-ups indicates an even higher level of fitness for each element. Point out that walking/running the mile in more time, reaching a shorter distance on the sit and reach or performing fewer sit-ups or pull-ups indicates a need for improvement.

Students who exceed the range on skinfold measurements can

reduce their risk of health problems by decreasing body fat. One way to do this is to increase aerobic activity.

Tell students to put a star by the element of fitness that was best for them on the **Assess Your Fitness** worksheet. Have students circle the element they most need to improve.

Explain that improvement may be a goal for some students, but it is also important to exercise in order to maintain levels of fitness. Tell students that the next lessons will focus on ways to improve other elements of fitness.

■ Use the ***Teacher Background Information*** on improving aerobic capacity to present a mini-lecture. Show students the **Aerobic Prescription** transparency to illustrate the concepts presented in the mini-lecture.

Have students figure their target heart rates and practice checking their pulse.

■ Tell students they will now have the opportunity to practice an aerobic workout. (*Note:* This activity can be conducted indoors or outdoors. When conducted inside, the activity is more fun when accompanied by popular music or a videotape on aerobic dance.)

First, have students jog slowly for about five minutes to warm up. Second, have students perform stretching exercises for about five minutes. (See exercises for flexibility in Lesson 5.)

Third, instruct students to jog or dance to reach their target heart rates (THR) of 135-168 beats per minute. Have students continue the activity for at least 20 minutes, checking their pulse several times during the activity to determine whether they have reached and maintained their THR.

Fourth, have students reduce their activity over a five-minute time period to cool down. Last, conclude the workout by having students perform the stretching exercises again.

Evaluation

Have students write a personal contract for aerobic capacity. The contract should include: a statement describing the student's

current level of aerobic capacity (as determined by the assessment); a choice of aerobic activities; and an aerobic exercise plan (including warm up, stretching, exercise at the THR, cool down and stretching).

Review student plans for completeness and appropriateness based on their personal levels of aerobic fitness.

Follow-Up/ Extension

Have students work in pairs or triads to develop a pamphlet. The pamphlet should describe (and perhaps illustrate) activities that can improve aerobic capacity and outline the components and steps of an aerobic workout. All pamphlets should have a title and may contain any other information students feel is important.

Have students work in pairs or triads to develop a poster to illustrate activities that can improve aerobic capacity. The poster should outline the components and steps of an aerobic workout. Students can cut pictures from magazines and/or use drawings to make the poster.

TEACHER

Improving Aerobic Capacity

Teacher Background Information

Improvement in aerobic capacity can be achieved through many activities, as long as the activity places sufficient demand on the heart and lungs. Activities that improve aerobic capacity must fulfill requirements that involve the type of activity, intensity, duration and frequency.

Type of activity—The exercise should be continuous and involve repetitive movements of the large muscle groups. Swimming, cycling, basketball, cross-country skiing, aerobic dancing, walking and jogging meet this requirement. Other activities such as tennis and racquetball can qualify if the action is continuous. Whichever exercise you choose, your aerobic workout should follow the same pattern:

1. Warm up to elevate body temperature (five minutes).
2. Stretch to loosen muscles and prevent injury (five to ten minutes).
3. Exercise at your target heart rate (at least 20 minutes).
4. Cool down by moving more slowly (five minutes).
5. Stretch to prevent muscle soreness (five to ten minutes).

Intensity—The activity you choose should be performed with enough intensity to reach and maintain your target heart rate (THR). This rate is the number of times your heart needs to beat each minute to have a positive effect on your cardiorespiratory system. To determine your THR, use the following formula:

	220			220	
–	_____	your age	–	_____	your age
=	_____	maximum heart rate	=	_____	maximum heart rate
–	_____	your r.h.r. (resting heart rate—the number of times your heart beats when you are at rest)	–	_____	your r.h.r. (resting heart rate—the number of times your heart beats when you are at rest)
=	_____		=	_____	
x	.70		x	.50	
=	_____		=	_____	
+	_____	your r.h.r.	+	_____	your r.h.r.
=	_____	upper end of your target heart rate	=	_____	lower end of your target heart rate

For example, the THR for a person who is 16 years old and has a resting heart rate of 73 beats per minute would be calculated as follows: 220 - 16 = 204 - 73 = 131 X .50 = 65.5 + 73 = 138.5 (lower end of the range) 220 - 16 = 204 - 73 = 131 X .70 = 91.7 + 73 = 164.7 (upper end of the range). While exercising, this 16 year old's heart should beat between 139 and 154 beats per minute. (Students between the ages of 13 and 20 have a THR of between 135 and 168 beats per minute.)

While exercising, stop your activity and find your pulse at the carotid artery. Once you have found your pulse, count the number of beats you feel in a six-second period and add a zero. This number will be your heart rate. If your pulse rate is below your THR, you need to exercise harder. If your pulse rate is above your THR, you need to exercise with less intensity.

Duration—You should exercise at your THR for 20-30 minutes.

Frequency—To maintain or improve your aerobic capacity, you must exercise three to six times per week.

TEACHER

How Fit Are You?

Girls					
Age	Activity				
	Walk/Run (min.)	Skinfolds (mm)	Sit & Reach (cm)	Sit-ups	Pull-ups
12	11:00	16-36	25	33	1
13	10:30	16-36	25	33	1
14	10:30	16-36	25	35	1
15	10:30	16-36	25	35	1
16	10:30	16-36	25	35	1
17	10:30	16-36	25	35	1
18	10:30	16-36	25	35	1
	aerobic capacity	body composition	flexibility	muscular strength and endurance	

Boys					
Age	Activity				
	Walk/Run (min.)	Skinfolds (mm)	Sit & Reach (cm)	Sit-ups	Pull-ups
12	9:00	12-25	25	38	2
13	8:00	12-25	25	40	3
14	7:45	12-25	25	40	4
15	7:30	12-25	25	42	5
16	7:30	12-25	25	44	5
17	7:30	12-25	25	44	5
18	7:30	12-25	25	44	5
	aerobic capacity	body composition	flexibility	muscular strength and endurance	

TEACHER

Aerobic Prescription

Type of Activity—Continuous and Repetitive
Intensity—At Your Target Heart Rate (156-168 beats per minute)
Duration—At Least 20 Minutes
Frequency—Three to Six Times Each Week

Some Popular Aerobic Activities

aerobic dance
ballet
basketball
bicycling
gymnastics
jogging
jumping rope
karate
racquetball
rowing
skateboarding
skating
skiing
soccer
swimming
tennis
volleyball
walking

Checking Your Pulse

LESSON 5

LOOKING GOOD—FEELING GOOD

Objective

Students will be able to analyze ways to improve body composition, flexibility, muscular strength and endurance.

Time

One class period.

Overview

Maintaining a healthful body composition, an appropriate degree of flexibility and an adequate level of muscular strength and endurance enables us to meet the demands of daily living. In addition, the risk of injury and disease is reduced. This lesson invites students to explore ways in which these elements of fitness can be enhanced.

Teacher Materials and Preparation

HAVE:

- ✓ Overhead projector.
- ✓ Exercise mats or other comfortable surface.
- ✓ A pencil for each student.

COPY:

- ✓ **Improving Body Composition and Flexibility** student information sheet, one for each student.
- ✓ **Improving Muscular Strength and Endurance** student information sheet, one for each student.
- ✓ **Fitness Prescriptions**, one for each student.

MAKE:

- ✓ Transparency of **Exercises for Flexibility**.
- ✓ Transparency of **Exercises for Muscular Strength and Endurance**.

INSTRUCT:

- ✓ Students to wear clothing and shoes for exercising.

Key Points

- ➤ Body composition is influenced by eating habits and activity level.
- ➤ Flexibility can be improved through stretching exercises.
- ➤ Free weights, weight machines and calisthenics can improve muscular strength and endurance.

Procedure

■ Remind students that the previous lesson focused on improving aerobic capacity. Tell them that today's lesson focuses on improving the other elements of fitness.

Distribute the **Improving Body Composition and Flexibility** student information sheet. Review the information with students. Show students the **Exercises for Flexibility** transparency. Explain and demonstrate how each exercise is performed. Have students perform each exercise after you explain it.

■ Distribute the **Improving Muscular Strength and Endurance** worksheet. Review the information with students. Show students

the **Exercises for Muscular Strength and Endurance** transparency. Explain and demonstrate each exercise. Have students perform each exercise after you explain it.

■ Divide the class into groups of three or four students. Distribute the **Fitness Prescriptions** worksheet. Tell groups to discuss the case studies and write an exercise prescription that would enable each person to improve his or her element of fitness.

Have each group explain or demonstrate the group prescription for one of the case studies.

■ Remind students that the **Fitness Facility Survey,** the **Public Fitness Facility Survey** and the **Fitness Interview** are due at the next lesson.

Evaluation

Observe students' work in small groups and the group presentations to assess their ability to analyze ways to improve fitness. The element of fitness each of the characters on the **Fitness Prescriptions** worksheets need to improve is: Cleo—aerobic capacity; Raphael—body composition; Nikki—flexibility; Leona—muscular endurance; Mitch—muscular strength.

STUDENT

Improving Body Composition and Flexibility

Body Composition

You can improve body composition by making good nutrition and regular exercise a part of your normal routine. For good nutrition, you should:

- Eat a variety of foods from the four basic food groups—meat/protein, fruit/vegetable, bread/cereal and milk/cheese.
- Limit the amount of salt and refined sugar in your diet.
- Eat complex carbohydrates (fruits, vegetables and whole grain products).
- Avoid fad diets.
- Limit fatty foods.

When we use our muscles in regular exercise, they become stronger and firmer. Physical activity not only builds muscles—it also burns calories. Because exercise helps burn excess fat and build muscle, you look and feel better.

Flexibility

You will become more flexible by making stretching a part of your daily activity. Stretching can:

- Help prevent injuries such as muscle strains and shin splints.
- Reduce muscle tension and help you feel more relaxed.
- Serve as a warm-up for vigorous physical activities.

Static or sustained stretching is the safest way to stretch. When you stretch, you should reach to the point of discomfort, then back off slightly. Relax and hold the stretch for 10 to 20 seconds. The stretch should never be painful. Concentrate on the feeling of the stretch.

The guidelines for safe stretching include:

- Before you stretch, increase your body temperature by running in place slowly or doing some other rhythmic activity. Raising your temperature increases flexibility and reduces the risk of injury.
- Do a minimum of five repetitions of each stretch.
- Breathe slowly and rhythmically throughout your stretches.
- Perform each stretch regularly. If you don't use it, you lose it.
- Don't do any stretches that involve deep knee bends or full squats. These activities can injure your knees or lower back.

STUDENT

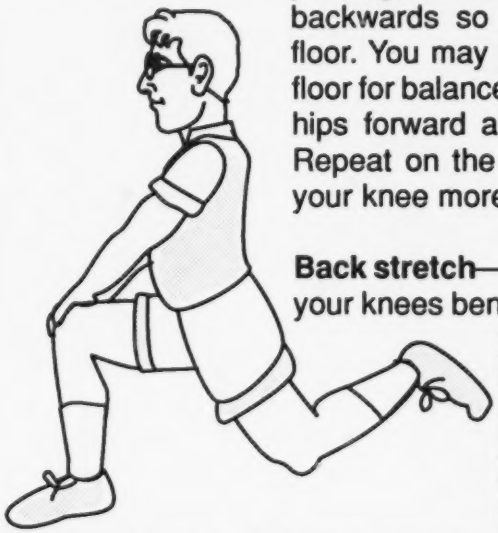
The following stretches will increase your flexibility.

Neck stretch—Drop your head and slowly move it in a half circle, first left and then right. Do *not* tip your head backward to make a full circle.

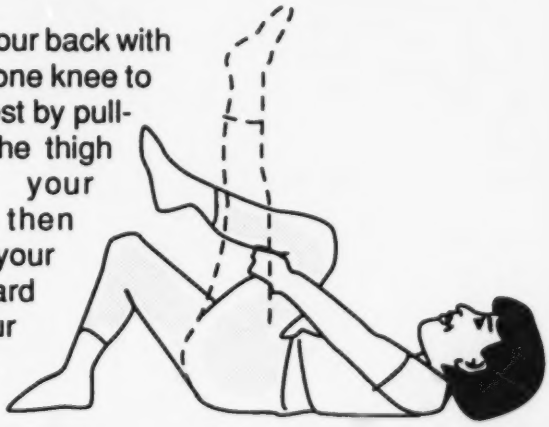
Hip-leg stretch—Sit with one foot against a wall or other stationary object. Bend one knee, keeping the foot close to your buttocks. Clasp your hands behind your back, bend forward and hold. Keep your lower back as straight as possible. Let your bent knee move to the side so your trunk can move forward.

Shin stretch—Kneel on both knees, turn to your right and press down on your right ankle with your right hand and hold. Keep your hips forward and do not sit on your heels. Repeat on the left side.

Hip-thigh stretch—Kneel with your right knee directly above your right ankle and stretch your left leg backwards so your knee touches the floor. You may place your hands on the floor for balance if necessary. Press your hips forward and downward and hold. Repeat on the right side. Do not bend your knee more than 90 degrees.

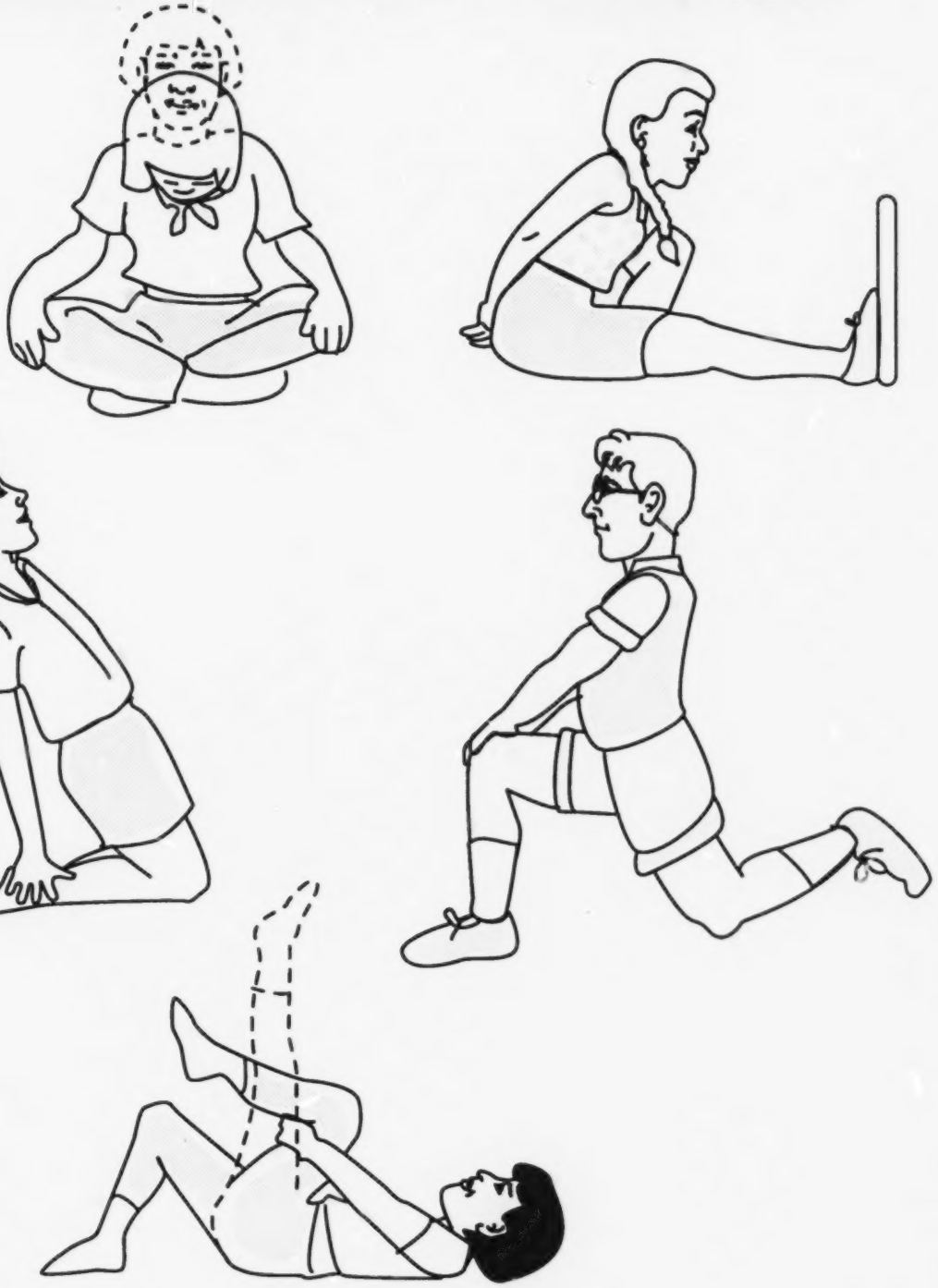


Back stretch—Lie on your back with your knees bent. Draw one knee to your chest by pulling on the thigh with your hands, then extend your leg toward the ceiling and hold. Pull your knee to your chest again and return to the starting position. Repeat with the other leg.



TEACHER

Exercises for Flexibility



STUDENT

Improving Muscular Strength and Endurance

Muscular strength and endurance can be improved by demanding more work from your muscles. This is called overloading. That's why it's important not to quit exercising when your muscles start to tire.

Muscular training is very specific. If you want to build up your arms, you must overload your arm muscles. Overloading your leg muscles will not increase the muscular strength of your arms.

Reps and *sets* are the building blocks of the workout. Reps are repetitions of an exercise. To do a sit-up for eight reps means to perform it eight times in a row before resting. A set is one group of reps followed by a rest interval. Performing eight sit-ups, resting 45 seconds to a minute, then doing eight more sit-ups equals two sets.

A workout for muscular strength or endurance should include 8-12 reps of each exercise for 3 sets. When an exercise becomes easy to do, add 2 1/2 to 5 pounds to your barbell, dumbbells or other equipment.

The following are popular for improving muscular strength and endurance:

- ▲ free weights (hand-held weights, dumbbells and barbells)
- ▲ machines (Universal, Hydrofitness, Nautilus, Taurus and Avita)
- ▲ calisthenics (sit-ups, push-ups, leg raises, etc.)

Improving muscular strength is different from improving muscular endurance. To increase strength, you do a few repetitions (usually 5 to 8) with heavy loads. Muscular endurance is developed by doing more repetitions (usually 10 to 14) with lighter loads.

The guidelines for safely improving muscular strength and endurance include:

- ▲ Have an exercise instructor demonstrate the proper use of the equipment if you are using free weights or machines.
- ▲ Don't exercise alone. Use a spotter if you're using barbells.
- ▲ Warm up and stretch before beginning.
- ▲ Gradually increase your level of exercise.
- ▲ Allow at least 48 hours for your muscles to recover from a workout. Workouts on consecutive days may do more harm than good, because the body cannot adapt that quickly.
- ▲ Don't let more than four days pass without working out. Muscles will begin to break down if you let more than three or four days pass without exercising them.
- ▲ Inhale when lifting and exhale when releasing.

STUDENT

The following calisthenics will increase your muscular strength and endurance.

Outer-thigh raise—Rest on your forearm and hip, with your bottom leg bent at a 90-degree angle and your top leg raised slightly. Slowly lift and lower your top leg in a straight line with your body. Repeat with the other leg.

Inner-thigh raise—Rest on your hip with your forearm and bent upper leg helping you to balance. Rotate your bottom leg out so that your heel is turned up and your toes are turned down. Keep your foot flexed and lift your leg as high as you can without rolling your hip back. Repeat with the other leg.

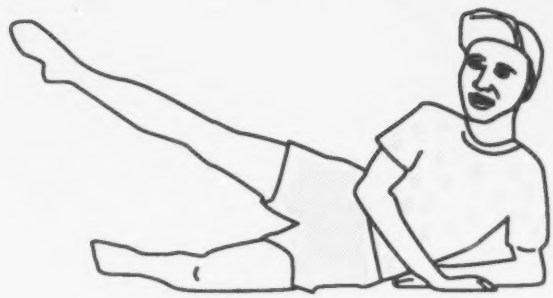
Sit-ups—Lie on your back with your knees flexed and your feet on the floor. Place your heels 12 to 18 inches from your buttocks. Cross your arms on your chest with your hands on opposite shoulders. Tuck your chin toward your chest. Tighten your abdominal muscles to curl into a sitting position until your elbows touch your thighs. Keep your feet on the floor.

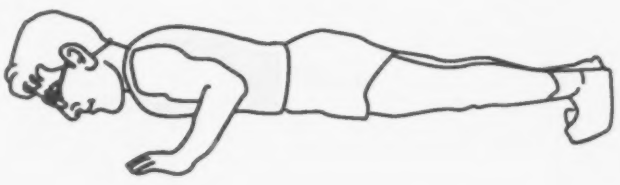
Push-ups (girls)—Assume a front-leaning position with knees bent up and hands under shoulders. Lower your chest to the floor, raise and repeat.

Push-ups (boys)—Assume a front-leaning position. Lower your body until your chest touches the floor. Raise and repeat.

TEACHER

Exercises for Muscular Strength and Endurance





STUDENT

Fitness Prescriptions

Directions: Read the following case studies. Discuss the case studies with your group and decide which element of fitness each person needs to improve. Then write an exercise prescription for each person. In each prescription, list specific ways in which the element of fitness can be improved.

Cleo

Cleo had been excited about the big Christmas dance for weeks, especially because Julio had asked her to go with him. The band was great and all her friends were there. The decorations looked terrific, and Julio was everything Cleo had expected and more.

But after about 30 minutes of nonstop dancing, just when things with Julio were going great, Cleo had to sit out some of the dances. She couldn't catch her breath. She just didn't seem to have the energy to keep going.

Element of fitness that needs improvement:

Fitness Prescription:

Rx

Raphael

School was almost over, and Raphael was looking forward to some lazy afternoons with friends at the lake. He retrieved his swimsuit from his bottom drawer and pulled it on. Uh oh! The suit seemed to be a little tighter this year. Raphael decided to take a look in the mirror. Oops! He noticed a few bulges and ripples that weren't there last year.

Raphael was concerned about his appearance. In only a couple of months, the lake would be warm enough for swimming.

Element of fitness that needs improvement:

Fitness Prescription:

Rx

STUDENT

Nikki

Nikki is pregnant with her first baby. She's very excited. There's just one problem. Lately, Nikki has developed a backache that just won't go away. She bent over the other day to pick up a book and had trouble straightening up.

Element of fitness that needs improvement:

Fitness Prescription:

Rx

Leona

Leona has always made a little extra spending money and helped her neighbors out by raking leaves in the fall. This October Leona discovered that she got tired before she finished raking even one yard. The next day she was so sore she could hardly get out of bed.

Element of fitness that needs improvement:

Fitness Prescription:

Rx

Mitch

Mitch had been bragging about the used car he bought from his cousin. It had a great sound system and a new paint job. Mitch drove his new car to the Pizza Palace for some pepperoni pizza. When he was ready to leave, he couldn't get the car started. He tried to push the car while his girlfriend steered, but it wouldn't budge.

Element of fitness that needs improvement:

Fitness Prescription:

Rx

rest, nutrition and drug use as they relate to fitness. This lesson helps students identify factors that influence the success of a fitness program.

Teacher Materials and Preparation

HAVE:

✓ Overhead projector.

COPY:

✓ **An Overheard Conversation** worksheet, one for each student.

✓ **Running the 10K, Hiking Pinnacle Mountain** and **Playing in the Hoopfest** worksheets, enough copies of each for several students.

MAKE:

✓ Transparency of **Planning for Fitness**.

✓ Transparency of **Possible Effects of Steroids**.

REVIEW:

✓ **Preparing for Fitness** ***Teacher Background Information***.

INSTRUCT:

✓ Students to return the completed **Membership Fitness Facility Survey, Public Fitness Facility Survey** and **Fitness Interview** worksheets from Lesson 1.

Key Points

➤ Appropriate dress can make exercise more enjoyable and reduce the risk of weather-related problems.

➤ Drinking water is the best way to replace the fluids lost during physical activity.

➤ A balanced diet provides adequate nutrition for the demands of physical activity.

➤ Steroid use can damage body organs and cause psychological changes.

➤ Proper exercise equipment decreases wear and tear on the body and reduces the risk of injury.

➤ Adequate sleep prepares the body for physical activity and contributes to overall fitness.

LESSON
6

BE PREPARED

Objectives

Students will be able to identify common myths associated with fitness.

Students will be able describe factors that influence the success of a fitness program.

Students will be able to analyze fitness facilities in the community.

Time

One or two class periods.

Overview

Improving or maintaining fitness takes time and perseverance. Many overly enthusiastic exercisers end up on the sidelines because they ignored such factors as equipment, weather or their own bodies' danger signals.

In addition, many persons who exercise fail to reach their personal best because they fail to recognize the roles of fluid replacement,

Procedure

■ Explain to students that there are many myths about fitness. To be successful in our fitness programs, we need to know what is true and what is false. Divide the class into small groups, and distribute **An Overheard Conversation** worksheet. Tell students to read and discuss the conversation in their groups and then complete the worksheet.

■ Show students the **Planning For Fitness** transparency. Review each of the factors that contribute to the success of a fitness program, using ***Teacher Background Information*** as a guide.

■ Show students the **Possible Effects of Steroids** transparency. Emphasize the health risks associated with the use of these drugs.

■ Conduct a class discussion about myths related to fitness. Tell students to look again at **An Overheard Conversation** worksheet. Ask if any of their answers would change.

Have students return to their small groups. Allow groups to select one of the following worksheets: **Running the 10K, Hiking Pinnacle Mountain** or **Playing in the Hoopfest**. Tell groups to choose one student to read the situation and another to report group answers to the class. Tell students to discuss their situations with their group and agree on a group answer to the questions.

Then have a reporter from each group report the group's answers to the class. As reports are made, confirm the appropriateness of correct responses and correct any misinformation.

■ Explain that having exercise facilities available is also an important factor in determining the success of a fitness program. Tell students they will now learn about fitness opportunities in the local community.

Have student volunteers report their findings on the **Membership Fitness Facility Survey** and the **Public Fitness Facility Survey** from Lesson 1. Use the information from the surveys to lead a class discussion.

Point out that some people may choose fitness facilities as a way to improve or maintain their fitness. Emphasize, though, that many people plan their fitness programs around activities that are as accessible and free as the street.

Also have student volunteers report their findings from the **Fitness Interview**. Use the information from the interviews to conduct a class discussion.

Evaluation

Assess student responses on **An Overheard Conversation** worksheet for the identification of fitness myths.

Observe student work in small groups and group reports for their knowledge of factors that influence the success of a fitness program.

Evaluate student reports on the **Membership Fitness Facility Survey,** the **Public Fitness Facility Survey** and the **Fitness Interview** worksheets.

Preparing for Fitness

Teacher Background Information

Preparing for Weather

When planning to exercise, consider the weather (temperature and humidity) and dress accordingly. In hot weather, choose light colors and fabrics that allow your body to dissipate the heat. Never wear rubberized or plastic clothing. Take it easy during the first few hot days to allow your body to get used to warmer weather. If you feel weak and tired while exercising, stop and drink several ounces of water.

Protect yourself from cold weather by covering as much of your body as possible. Dress in layers of clothing that you can remove as you begin to warm up. Choose dark colors that absorb heat.

Remember that about 40 percent of body heat is lost through your head and neck, so wear a cap or other head covering. The areas most sensitive to cold are fingers, toes and ears. Protecting these with mittens, wool socks and caps reduces the discomfort and danger of exposure to low temperatures.

Replacing Fluids

Your body loses fluid through sweating even in cool temperatures. Unfortunately, thirst is not always a good indicator of the body's need for fluid during physical activity. Therefore, you should make a conscious effort to drink enough fluids when exercising.

Plain water is the ideal fluid replacement. Avoid sugary drinks (soft drinks) prior to exercising. You may decrease your endurance, due to the body's production of insulin in response to the sugar.

Beverages containing caffeine (colas, teas and coffee) should also be avoided, because they stimulate fluid loss in the body. Alcohol hampers coordination and impairs performance, due to the depressant effect of the drug. In addition, alcohol promotes the loss of fluid from the body. Americans take in more than enough salt through the foods they eat to replace salt lost in sweating. Never take salt tablets. They can lead to dehydration and elevate blood pressure.

Supplying Nutrients

For most people who exercise to improve fitness, eating a balanced diet is all that is required to supply the body with the necessary nutrients. In some endurance sports such as running

marathons, athletes engage in *carbo(hydrate) loading* to increase the energy sources (glycogen) in their muscles.

But for less strenuous levels of physical activity, your body's fuel comes from foods eaten hours, even days, earlier. For this reason, eating a candy bar or other food high in sugar before exercising will not give you the sustained energy you need.

Supplements (vitamins, minerals and protein powders) are unnecessary for active people who eat a balanced diet. Excessive amounts of vitamins and minerals can be dangerous and do not provide the combination of nutrients that are supplied by eating a variety of foods.

Using Steroids

Anabolic steroids are drugs that function like the male hormone testosterone. Steroids can be taken in tablet form or by injection. Steroids are used medically to treat certain diseases and are prescribed by doctors for people who have growth disorders.

Bodybuilders and other athletes may use steroids in an effort to stimulate muscle growth and weight gain. Steroids also increase aggression, which may make the athlete train harder.

Steroids promote increased strength and bulk; however, experts agree the health risks outweigh any benefits. Some possible effects include: liver damage, hypertension, certain forms of cancer, heart disease, muscle cramps, acne and gastrointestinal distress.

Men who take steroids may experience breast growth, reduced sperm production and shrinking of the testicles. Side effects for women include growth of facial and body hair, baldness, a lowering of the voice, decreased breast size, menstrual irregularities and enlarged genitals. People who inject steroids may be exposed to HIV (the AIDS virus) if they share needles.

Selecting Equipment

Proper equipment makes a big difference in how well you perform and your enjoyment of the activity. Good shoes are essential for almost all sports and activities. Boots are important for hiking or skiing. Appropriate footwear is necessary for aerobic dance and all running sports. A proper fit is important, too. It not only protects you from wear and tear, but minimizes your risk of injury.

Other activities require specialized equipment, gloves, goggles, rackets, eye protectors, bicycles and specialized clothing. If you notice that participants usually wear or use certain items, there must be a valid reason, so check it out.

Selecting equipment can be confusing because of the variations in design and price. Some equipment may be barely adequate. Before you purchase, observe what others are using and ask experienced participants for advice. If you are in doubt, consider renting first and buying later.

Rest

Sleep is an indispensable part of a fitness program. During sleep, we recover from physical and emotional stresses and injuries. The amount of sleep needed varies from one individual to the next. In fact, for each individual, sleep needs vary according to one's activity level, overall health and age.

Young people generally require about eight hours of sleep per night. We know that growth hormone is secreted almost exclusively during sleep—and growth hormone provides for the growth and repair of body cells.

When we fail to get enough sleep, all body systems work less efficiently. We become irritable, have trouble concentrating and lose coordination. People who go without sleep too long may have hallucinations.

STUDENT

An Overheard Conversation

Directions: Some common beliefs about fitness are *highlighted* in the following conversation. Discuss each statement with your group. Circle the statements that indicate good preparation for fitness.

The following conversation was overheard in front of the school one afternoon.

Mark: Hey, are you guys running in the 10K this weekend?

Susan: I'm thinking about it. But I've never run in a race before, so I'm kind of nervous.

Lauren: I've signed up. I heard *it's going to be hot, but I've got this great looking black bodysuit to wear!* That's why I'm taking a couple of salt tablets just in case. You know, *when you sweat, your body needs the extra salt.*

Susan: Is that true? I always thought that *if you sweat a lot, you need to drink some of those drinks that you see advertised on TV.* You know, the ones with the special chemicals in them.

Matt: I'm already in training for the race. I've been *taking extra vitamins and a high protein powder to make sure my body has the protein it needs to make lots of muscle.* Everybody knows that's important if you're trying to get in shape. And about 10 minutes before the race, I'll *eat two candy bars to give me the quick energy I need for that extra edge.*

Mark: My dad says *carbohydrates are the foods to eat when you exercise.* He should know. One of the guys he works with is a bodybuilder. You should see this guy! He's so big that he has to get his clothes at a special store.

Lauren: I'll bet your dad's friend takes steroids. I've heard *steroids are really dangerous.* I read in the newspaper about a man who grew breasts after he took steroids and a teenager that got a liver disease!

Matt: I don't believe that garbage. *Steroids only make your muscles grow faster and stronger.* No one would take them if they did weird things to your body.

Susan: Who knows about that stuff? I'd like to go with you guys, but I don't have any running shoes.

Mark: Just wear those shoes you have on. *Your shoes really don't matter.* You're not running the Boston Marathon.

Susan: I've got to go. See you guys this weekend. Be sure to get rested up for the 10K. You know, *you need extra sleep when you're a high-powered athlete.*

Planning for Fitness

The right clothes make exercise more enjoyable and reduce the risk of weather-related problems.

Drinking water is the best way to replace the fluids lost during physical activity.

A balanced diet provides adequate nutrition for the demands of physical activity.

Steroid use can damage body organs and cause psychological changes.

Proper exercise equipment decreases wear and tear on the body and reduces the risk of injury.

Adequate sleep prepares the body for physical activity and contributes to overall fitness.

TEACHER

Possible Effects of Steroids

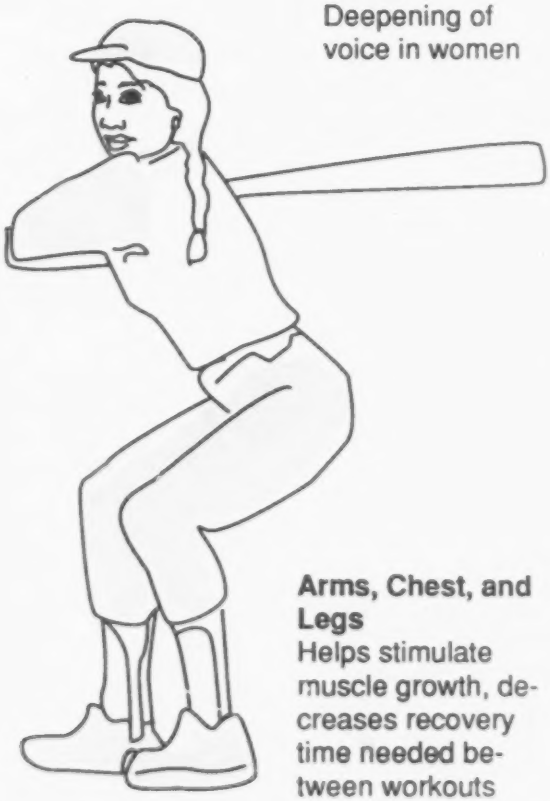
Brain
Increased hostility can lead to tranquilizer use, hypertension, psychological dependence and eating compulsions; increases aggression, which makes injuries more probable

Face
Facial hair growth, body hair growth and baldness in women; acne in both men and women

Heart
High blood pressure, clogging of arteries

Throat
Deepening of voice in women

Genitals
Sterility or atrophied testicles in men; menstrual irregularities, enlarged genitals in women



Chest
Breast growth in men; breast cancer and decreased breast size in women

Arms, Chest, and Legs
Helps stimulate muscle growth, decreases recovery time needed between workouts

Liver and Prostate
Liver cancer in men and women; prostate cancer in men

STUDENT

Running the 10K

Directions: With your group, answer the following questions about preparing to run the 10K.

It's a cold winter Saturday morning. You are up early getting ready for the 10K. The weather channel forecasts clear skies with a high of 38 degrees. The 10K will start at 10:00 a.m.

1. How should you dress?

2. What should you eat and drink?

3. Is there any equipment you should take with you?

4. What advice would you give to a friend who wants to start a regular exercise program?

   a. about nutrition?

   b. about sleep?

   c. about taking steroids?

STUDENT

Hiking Pinnacle Mountain

Directions: With your group, answer the following questions about preparing to hike Pinnacle Mountain.

It's a cool spring morning. You are preparing to hike Pinnacle Mountain with a group of friends. The hike takes about three hours to complete. The weather channel forecasts overcast skies with a chance of rain. The expected high for the day is 50 degrees. You are to meet your friends at 1:00 p.m.

1. How should you dress?

2. What should you eat and drink?

3. Is there any equipment you should take with you?

4. What advice would you give to a friend who wants to start a regular exercise program?

   a. about nutrition?

   b. about sleep?

   c. about taking steroids?

STUDENT

Playing in the Hoopfest

Directions: With your group, answer the following questions about preparing to play in the Hoopfest.

It's a hot summer day. You are preparing to play in the city's Hoopfest (three-on-three basketball) with a group of friends. The weather channel forecasts sunny skies with high humidity. The expected high for the day is 90 degrees. The first game starts at 9:00 a.m., with additional games scheduled throughout the day.

1. How should you dress?

2. What should you eat and drink?

3. Is there any equipment you should take with you?

4. What advice would you give to a friend who wants to start a regular exercise program?

   a. about nutrition?

   b. about sleep?

   c. about taking steroids?

LESSON 7

PUTTING IT ALL TOGETHER

Objectives

Students will be able to identify personal goals for fitness.

Students will be able to evaluate the effectiveness of a personal fitness plan.

Time

One class period.

Overview

There is a close relationship between physical fitness and overall lifestyle. Fitness has a reciprocal impact upon attitude, eating and sleeping habits and body awareness. This lesson deals with the mental attitude and lifestyle that are linked to the success of beginning and maintaining regular exercise.

Students complete an inventory to determine the goals and barriers of a personal fitness program. The information gained through the inventory is used to develop a personal fitness plan.

Teacher Materials and Preparation

HAVE:
✓ Overhead projector.

COPY:
✓ **Setting Fitness Goals** worksheet, one for each student.
✓ **Developing Your Fitness Plan** worksheet, one for each student.
✓ **Fitness Plan** worksheet, two for each student.

MAKE:
✓ Transparency of **Developing Your Fitness Plan** ***Example***.
✓ Transparency of **Ratings for Popular Activities**.
✓ Transparency of **Fitness Plan** ***Example***.

Key Points

➤ Goal setting is an important part of developing personal fitness.
➤ Developing a personal fitness plan can improve your chances of success in establishing a long-term fitness program.

Procedure

■ Explain that getting ready for exercise means being psychologically ready, as well as selecting the appropriate activities and having the proper equipment. All of these factors influence your success in starting or maintaining a fitness program.

Tell students they will begin this lesson by determining their goals in undertaking an exercise program. Distribute the **Setting Fitness Goals** worksheet. Have students complete the worksheet to determine their motivations for fitness.

■ Conduct a brief class discussion about goal setting. Ask students the following questions:

- Why do people set goals? (to order and gain control of their lives, to get what they want)
- How can we improve our chances of reaching a goal? (Make the goal realistic; get friends and family to support you emotionally; write the goal down and put it where you can see it; develop a plan; outline step-by-step how to reach your goal.)

■ Tell students that developing a personal fitness program is the next step in reaching their goals. Distribute **Developing Your Fitness Plan** worksheet. Have students complete the worksheet as you refer to each step in a mini-lecture outlining the steps.

Use the **Developing Your Fitness Plan *Example*** and **Ratings For Popular Activities** transparencies to emphasize the main points of the mini-lecture.

Step 1—Make it personal. Assess your present state of fitness by using the **Assess Your Fitness** worksheet that was completed in Lesson 2. Look at the elements you need to improve the most. Try to incorporate as many elements as possible into your fitness program.

For example, you can work on flexibility while you stretch and cool down as part of your aerobic workout. You could do calisthenics to improve muscular strength and endurance as part of your warm-up for your aerobic workout.

Your aerobic workout will not only improve your aerobic capacity but will contribute to a healthy body composition as well. (Refer to the **Ratings for Popular Activities** transparency to illustrate some activities that incorporate different elements of fitness.)

Step 2—Motivate yourself. Motivation is a common barrier to fitness. Remind yourself of your fitness goals (see **Setting Goals for Fitness**). Make exercise enjoyable by choosing activities you like. Support from family members and friends can also help you maintain your enthusiasm for exercise.

Step 3—Choose activities you will continue. Think about the activities that are convenient and that you will enjoy. Choose something you like to do. Consider your interests and skills as well as social factors when you select an activity.

Are you competitive? Racquetball or basketball may be for you. If you enjoy being alone, you may want to choose jogging or swimming. People who like to combine social activity with physical activity could choose walking with a friend.

You may want to talk to people who exercise about their experience with certain activities before you make your choice. Include activities that improve your aerobic capacity at least three days per

week—this is the kind of exercise that offers the most health benefits.

You may want to use several types of activities. You will be more likely to continue your fitness program if you have different ways to exercise.

Step 4—Proceed gradually. Even though you may want to progress quickly, you must give your body a chance to adjust, especially if you have not exercised in a while. It is important to set reasonable and attainable goals for yourself in your fitness plan.

Begin gradually and progress at a pace that is comfortable for you. Listen to your body. Expect some soreness if you are just beginning to exercise. But if the soreness is extreme or you feel pain, you're probably progressing too rapidly.

Step 5—Plan for fitness. The barrier to fitness that people cite most often is a lack of time. Often, people fail to exercise because they think it means taking a lot of time. However, planning the time for exercise into your weekly schedule is just like making plans for any other worthwhile activity.

Planning for fitness also means having the appropriate equipment available and in good repair. Remind yourself of the goals fitness can bring to your life—including improved appearance and better self-concept—and make exercise part of your routine.

Step 6—Choose your reward. Think of healthy ways to reward yourself, and follow through when you follow your exercise plan. Rewards can be physical, emotional or social. For example: Spending time with a friend or calling someone on the telephone is a social reward. Taking a bubble bath or taking a nap is a physical reward. Emotional rewards may include doing something special for yourself or simply telling yourself that you have accomplished something worthwhile.

■ Explain that students will now have the opportunity to develop their own fitness program for a one-week period. Tell students to use the information on the **Developing Your Fitness Plan** worksheet to complete the plan.

Distribute a **Fitness Plan** worksheet to each student. Use the

Fitness Plan *Example* transparency to illustrate how to fill in the chart.

Help students be realistic in developing their plans. Some students may already be very active and engage in regular exercise. Others may be less active and will benefit from simply walking several times each week. Encourage the more sedentary students to begin slowly. Support small changes in their activity levels.

Evaluation

Distribute another **Fitness Plan** worksheet to each student, and set the due date for one week later. Acknowledge that working on the body takes determination. Remind students not to expect miracles in one week, but to view the week as a beginning if they have not had a regular exercise program. Students who exercise regularly may use this worksheet as a checkup.

Have students record their exercise patterns for one week to see how closely their actual exercise levels compare to the plans they developed. You may want to extend this assignment by having students complete additional **Fitness Plan** worksheets periodically over the semester or school year.

STUDENT

Setting Fitness Goals

Directions: Consider the following list of fitness goals. Check *yes* if the goal is a reason you would give for beginning a fitness program. Check *no* if the goal is not your personal reason for fitness.

I would like to:

	Yes	No
1. Reduce my risk of disease.	_____	_____
2. Get in shape to perform sport or recreation activities.	_____	_____
3. Have a more positive outlook.	_____	_____
4. Reduce or control the amount of stress I feel.	_____	_____
5. Feel better about myself.	_____	_____
6. Improve my overall health.	_____	_____
7. Increase my energy level.	_____	_____
8. Establish good health habits.	_____	_____
9. Improve my appearance.	_____	_____
10. Sleep better and feel more rested.	_____	_____

STUDENT

Developing Your Fitness Plan

1. ***Make it personal.*** Write down the element(s) of fitness you most want to improve.

2. ***Motivate yourself.*** Write down the most important goal you expect to achieve.

3. ***Choose activities you will continue.*** Write down the activities you choose.

4. ***Proceed gradually.*** Write a reasonable and attainable exercise plan.

5. ***Plan for fitness.*** List the times you have available for exercise and the equipment you will need.

6. ***Choose your reward.*** Make a list of healthy activities you enjoy.

TEACHER

Developing Your Fitness Plan

Example

1. ***Make it personal.*** Write down the element(s) of fitness you most want to improve.
   ✓ ***body composition and aerobic capacity***

2. ***Motivate yourself.*** Write down the most important goal you expect to achieve.
   ✓ ***to improve my appearance***

3. ***Choose activities you will continue.*** Write down the activities you choose.
   ✓ ***walking, jogging and aerobic dance***

4. ***Proceed gradually.*** Write a reasonable and attainable exercise plan.
   ✓ ***warm up by walking around the block***
   ✓ ***stretch by doing flexibility exercises***
   ✓ ***jog for 20 minutes at my THR***
   ✓ ***cool down by walking***
   ✓ ***stretch again***

5. ***Plan for fitness.*** List the times you have available for exercise and the equipment you will need.
   ✓ ***after school on Tuesday and Thursday***
   ✓ ***Saturday or Sunday afternoon***
   ✓ ***shorts and a T-shirt***
   ✓ ***jogging shoes***

6. ***Choose your reward.*** Make a list of healthy activities you enjoy.
   ✓ ***going to the movies with friends***
   ✓ ***talking on the phone***
   ✓ ***driving the car***

Ratings for Popular Activities

Elements	Activities										
	Jogging	Bicycling	Swimming	Skating	Handball/racquetball	Nordic skiing	Alpine skiing	Basketball	Tennis	Calisthenics	Walking
Aerobic capacity	21	19	21	18	19	19	16	19	16	10	13
Muscular endurance	20	18	20	17	18	19	18	17	16	13	14
Muscular strength	17	16	14	15	15	15	15	15	14	16	11
Flexibility	9	9	15	13	16	14	14	13	14	19	7
Body composition	21	21	15	17	19	17	15	19	16	12	13

STUDENT

Fitness Plan

Week of: _____

Goal for the week:

Day	Activity	Time	Equipment	Reward
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				

TEACHER

Fitness Plan

Example

Week of: ***April 22-28***

Goal for the week:
Increase amount of exercise time to 25 minutes.
Spend 5 minutes stretching.

Day	Activity	Time	Equipment	Reward
Sunday	*walk to Carrie's*	*afternoon*	*comfortable shoes*	*talk to Carrie*
Monday	*stretch—warm-up—jog 20 minutes—cool down-stretch*	*afternoon*	*jogging shoes, shorts and shirt*	*hot shower*
Tuesday	*none*	*none*	*none*	------
Wednesday	*stretch—warm-up—bicycle—cool down—stretch*	*4 p.m.*	*bicycle and shorts*	*listen to music*
Thursday	*walk to and from school*	*morning & afternoon*	*none*	*rent a video*
Friday	*stretch—warm-up—jog 20 minutes—cool down—stretch*	*after school*	*jogging shoes, shorts and shirt*	*proud feeling of accomplishment*
Saturday	*basketball*	*afternoon*	*tennis shoes and shorts*	*hang out with friends*

APPENDIX

MATERIALS

Skinfold Calipers

A variety of skinfold calipers are available, ranging in cost from approximately $5 to $200. The calipers should produce a constant pressure of 10 grams per square millimeter. Good results are possible with inexpensive plastic calipers if they are used correctly. Calipers can be purchased from:

Creative Health Products
5148 Saddle Ridge Rd.
Plymouth, MI 48170
1-800-742-4478

Sit and Reach Apparatus

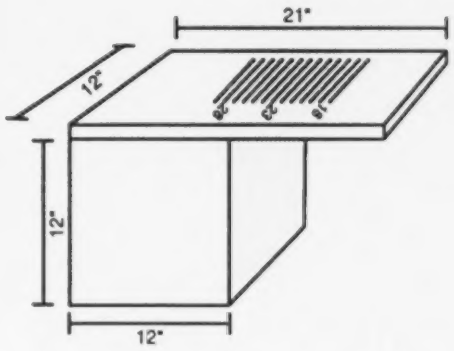
Steps for Construction:

1. Cut the following pieces from wood or a comparable construction material (3/4-in. plywood is best).
   - 2 pieces that are 12 in. x 12 in.
   - 1 piece that is 12 in. x 21 in.
   - 2 pieces that are 12 in. x 10 1/2 in.

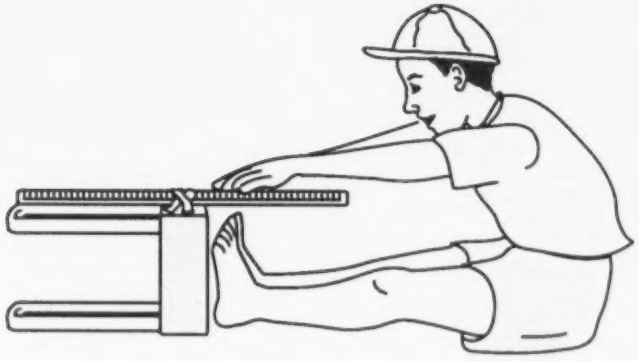
2. Put the pieces together with nails or screws and wood glue.

3. Inscribe one centimeter gradations in the top panel. Be sure that the 23 cm. line is exactly in line with the panel where the student's feet will be placed. (The measuring scale should extend from 9 cm. to about 50 cm.)

4. Coat the apparatus with two coats of polyurethane sealer.



An apparatus can be improvised by using a bench and meter stick.



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- ♦ myths and facts about exercise and fitness
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ISBN 1-56071-043-8

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Network Publications, a division of ETR Associates
Santa Cruz, CA